

State of California
The Resources Agency
Department of Water Resources
Division of Planning and Local Assistance



**Mitigated Negative Declaration and Initial Study
for the Northern Pike Containment System at the
Outlet of Lake Davis on Big Grizzly Creek**

Department of Water Resources
May 2006

Arnold Schwarzenegger
Governor
State of California

Secretary of Resources
The Resources Agency

Lester Snow
Director
Department of Water Resources

**State of California
The Resources Agency
Department of Water Resources**

**Mitigated Negative Declaration for the Northern Pike Containment System at the
Outlet of Lake Davis on Big Grizzly Creek**

Project Description: The project involves the construction of a containment system that will prevent fish, of any life stage, from passing through the Lake Davis outlet and¹ moving downstream into Big Grizzly Creek, and into the Feather and Sacramento River system. Construction will occur from July 2006 through November 2006.

Northern pike are a non-native invasive fish species that aggressively feeds on other fish. They were first discovered in Lake Davis in 1994 after having been successfully eradicated from Frenchman Lake in 1991. If they escape Lake Davis and expand throughout the Feather River system, and ultimately into the San Joaquin and Sacramento River Delta, there will be multiple negative consequences.

Since the rediscovery of northern pike in Lake Davis, the Department of Fish and Game has used a variety of methods to control the growth of the population and prevent pike escapement into other water bodies. Additionally, the Department of Water Resources has operated Lake Davis so that the reservoir does not spill through the Grizzly Valley Dam spillway and inadvertently release northern pike or their eggs into the downstream waters. The Department of Water Resources installed “graters” on the Grizzly Dam outlet work pipes in 1996. The graters kill most fish that leave the reservoir through the outlet pipes, but may allow juvenile fish and eggs to escape. Since the population of northern pike continues to grow in Lake Davis, the Department of Water Resources and Department of Fish and Game need greater assurance that northern pike, including adults, larvae, and eggs, do not have the opportunity to move downstream where all possibility of eradication will be lost.

The Department of Water Resources has designed a northern pike containment system for Lake Davis outlet discharges. The discharge from the reservoir outlet works will flow through any of six to eight “strainers” that will remove all material 1.0 mm or larger before discharging into Big Grizzly Creek, which flows into the Middle Fork of the Feather River. The 1.0 mm strainer openings will catch northern pike eggs and larvae, in addition to any adult fish. After passing through the strainer system, the pike-free water will be released into Big Grizzly Creek. The new containment system, once installed, would operate 24 hours a day, year round. If the strainers should cease operating, flow

¹ Text that is highlighted in yellow is wording that was added to address comments received during the public review period. This new text provides clarification and additional information. No changes were made to the project.

would be released through the emergency outflow pipe. The grater that was formerly attached to the outlet pipe will be fitted onto the end of the emergency outflow pipe.

Within Lake Davis, new bar racks will be installed over the existing bar racks on the mid-level and low-level intakes in Lake Davis. The new bar racks will decrease the current openings to 2 inches. The purpose of the bar racks is to help prevent adult fish and large debris from entering the strainers, and to reduce organic loading in the discharge water.

Each strainer will rest on a concrete pad in the streambed. To construct each concrete pad, loose soil and rock will be removed. The concrete pads will not extend up the stream bank. However, if any one pad needs increased width that is not allowed by the channel bottom, the bank may be cut back to allow for more room. If necessary, gravels may be added to areas between the concrete pads to provide a more even surface between the strainers.

The Cipolletti weir downstream of the stilling basin will be modified to support outlet pipes from the strainers and to keep the creek bed upstream dry. The notch in the weir will be filled with concrete to create a uniform height. The project requires that the entire area upstream of the Cipolletti weir be dewatered. The water in the channel from the outlet works to the Cipolletti weir will be pumped downstream of the Cipolletti weir.

During construction, no discharges into the stilling basin will be allowed, but a bypass pipe will be installed to provide flow to the channel downstream of the Cipolletti weir during construction. There will be two, four-day periods when no flow can be released from the outlet structure: during the installation of the bar racks and during the installation of the bypass pipe. If the bypass pipe does not function correctly, four additional four-day flow cessation periods will be needed during construction. After installation of the strainer system, all outlet discharges will occur through the strainer system downstream of the Cipolletti weir.

Construction materials such as pipe segments, strainers, and concrete will be delivered to the site from California State Highway 70 via Lake Davis Road. Lake Davis Road goes north from Portola, turns east and crosses over the top of Grizzly Valley Dam. It then meets Grizzly Road, which returns south back towards California State Highway 70. From Lake Davis Road, the project area at the outlet is accessed via a dirt road going south from Lake Davis Road on the east side of the dam. Construction equipment will also be delivered to the site via these routes. Concrete trucks, dump trucks, loaders, backhoes, tractors with flatbed trailers, and assorted personnel vehicles will be used at the site. Concrete will arrive as ready-mix from Portola.

During non-work periods (night-time, holidays, Sundays, etc.), the construction equipment and vehicles will be stored at the outlet work's parking area and along the access road. Equipment that has the potential to leak oil or other pollutants and contaminants (backhoes, trucks, etc.) will have containment devices to prevent spill from entering the environment. All contractors will follow a set of Environmental Protection Guidelines developed by the Department of Water Resources. State and federal

environmental statutes, rules, regulations, and policies will be followed to protect environmental resources. All construction activities shall be in accordance with environmental and regulatory permits issued for the project and all contractors will be held responsible for any violations as prescribed by law. All contractors will be responsible for the control of construction activities, maintenance of equipment, and conduct of their employees at the work site to reduce or eliminate identified environmental impacts.

Project location: Containment system construction will occur at the downstream toe of Grizzly Valley Dam. Lake Davis is located in Plumas County about six miles north of Portola via Lake Davis Road at an elevation of 5795 feet. The project is on the Crocker Mountain quadrangle, Range 13E, Township 23N, border area of sections 1 and 2.

Project Proponent: Department of Water Resources
Division of Operations and Maintenance
1416 Ninth Street
Sacramento, CA 95814

Finding: The project, which includes the mitigation measures described in the attached Initial Study, will have a less than significant impact on the environment.

Basis for Finding: Based on the Initial Study (attached) and mitigation measures the Department of Water Resources is committed to implement, no significant impact will occur as a result of this project. Implementation of the mitigation measures described in the Initial Study will prevent potentially significant adverse impacts to utilities and service systems. Additional mitigation measures will further reduce less than significant impacts to biological resources, hydrology and water quality, and recreation. Contractors will follow guidelines prescribed by Department of Water Resources engineers and environmental scientists to avoid or minimize adverse project impacts on the environment.

This document reflects the independent judgment of the Department of Water Resources. The Mitigated Negative Declaration is filed pursuant to Section 15072 of the Guidelines for Implementation of the California Environmental Quality Act. Copies of the Mitigated Negative Declaration and Initial Study, as well as documents referenced therein, are available for review at <http://www.watershedrestoration.water.ca.gov/fishpassage/> or by calling Leslie Pierce at (916) 651-9630.



Richard Sanchez, Principal Engineer
Division of Operations and Maintenance

Date

5/22/06

**State of California
The Resources Agency
Department of Water Resources
July 2006**

**Addendum to the Mitigated Negative
Declaration for the Northern Pike Containment
System at the Outlet of Lake Davis on Big Grizzly Creek**

PURPOSE

The Department of Water Resources (DWR) has prepared an addendum to the Mitigated Negative Declaration for the Northern Pike Containment System at the Outlet of Lake Davis on Big Grizzly Creek to clarify intended future operation of the strainers and outlet works. Section 15164 (b) of the California Environmental Quality Act (CEQA) Guidelines states that an Addendum to an adopted Negative Declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 (calling for the preparation of subsequent EIR or Negative Declaration) apply.

BACKGROUND

DWR has designed a northern pike containment system for Lake Davis outlet discharges. The discharge from the reservoir outlet works will flow through any of six to eight “strainers”. The strainers will remove all material 1.0 mm or larger before releasing the water into Big Grizzly Creek, which flows into the Middle Fork of the Feather River. The 1.0 mm strainer openings will catch northern pike eggs and larvae, in addition to any adult fish. After passing through the strainer system, the water will be released into Big Grizzly Creek. Construction will occur from July 2006 through November 2006. The Notice of Determination was filed on May 22, 2006.

The May 2006 Mitigated Negative Declaration and Initial Study state that the new containment system would operate 24 hours a day, year round (DWR 2006). After further refinement of the design and operation of the new containment system, DWR determined that it is possible to periodically bypass the containment system and release water through the 36-inch emergency outflow (bypass) pipe without releasing northern pike into Big Grizzly Creek. A new or retrofitted "grater" will be installed onto the end of this emergency outflow pipe to further reduce any chances of releasing live northern pike.

The strainers would operate when there is potential of northern pike larvae and eggs to escape through the outlet. During other times of the year, when no northern pike larvae or eggs are present in Lake Davis, outflow may be released either through the new strainers or the 36 inch strainer bypass pipe with the attached graters. DWR will consult with the Department of Fish and Game to determine when releases may be safely made through the 36 inch strainer bypass pipe.

The attached pages from the May 2006 Mitigated Negative Declaration and Initial Study (DWR 2006) show the changes made to reflect the clarification of project operation.

EXPLANATION OF THE DECISION NOT TO PREPARE A SUBSEQUENT MITIGATED NEGATIVE DECLARATION

CEQA Guidelines Sections 15162 and 15164 set forth the criteria for determining the appropriate environmental documentation, if any, to be completed when there is a pre-existing adopted Mitigated Negative Declaration covering a project. DWR provides the following findings pursuant to these criteria as required by CEQA Guidelines Section 15164 (e).

CEQA Guidelines Section 15162 (a) states that when a Negative Declaration has been adopted for a project, no subsequent Environmental Impact Report (EIR) shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole public record, one or more of the following:

- 1. Substantial changes are proposed in the project which will require major revisions of the previous negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.*

Discussion: Construction and operation of the northern pike containment system at the outlet of Lake Davis on Big Grizzly Creek was the focus of DWR's Mitigated Negative Declaration (State Clearinghouse number: 2006042012). On May 22, 2006, DWR adopted the Mitigated Negative Declaration and approved construction of the containment system. During the final design and operational planning process, DWR refined language describing when releases can be made through the strainers and the outlet pipes to continue to meet the Lake Davis Reservoir Management Plan objectives. DWR, in consultation with DFG, determined that it is often possible to bypass the containment system (strainers) and release water through the 36-inch emergency outflow (bypass) pipe without releasing northern pike into Big Grizzly Creek. A new or retrofitted grater will be installed onto the end of this emergency outflow pipe to further reduce any chances of live northern pike from escaping the reservoir. The strainers would routinely operate when northern pike larvae and eggs are present in Lake Davis and could escape through the outlet into the creek. During other times of the year, when no northern pike larvae or eggs are present in Lake Davis and other northern pike are large enough, outflow may be released through either the strainers or the 36 inch bypass pipe with the attached graters. Switching operation between the strainers and the 36 inch bypass pipe only changes the routing of water released through the outlet works and will not create new significant environmental effects. The modification does not increase the project footprint or introduce environmental impacts not evaluated in the initial study.

2. ***Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.***

Discussion: No new significant environmental effects or increases in the severity of previously identified significant effects will occur with the modification of when the strainers are operated. The modification of the operation of the strainers will only alter the route of the Lake Davis releases through the outlet works. The modification does not increase the project footprint or introduce environmental impacts not evaluated in the initial study.

3. ***New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the negative declaration was adopted (May 2006), shows any of the following:***

- a. ***The project will have one or more significant effects not discussed in the negative declaration.***

Discussion: The revised operation plan of the strainers and outflow pipes will not result in any significant effects on the environment. See discussion for #1 and #2 for more information.

- b. ***Significant effects previously examined will be substantially more severe than shown in the negative declaration.***

Discussion: None of the environmental effects that were identified in the Mitigated Negative Declaration and Initial Study will be substantially more severe due to the modification to the containment system. See discussion for #1 and #2 for more information.

- c. ***Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or***

Discussion: The operational changes do not alter any of the mitigation measures described in the Mitigated Negative Declaration or Initial Study (DWR 2006). The Mitigated Negative Declaration and Initial Study identified no infeasible mitigation measures.

- d. ***Mitigation measures or alternatives which are considerably different from those analyzed in the negative declaration would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.***

Discussion: No new mitigation measures are necessary due to these operational refinements.

CONCLUSION

Responses to the criteria #1-3 do not result in the need to prepare a Subsequent Mitigated Negative Declaration pursuant to CEQA Guidelines Section 15162 or 15164. Thus, this Addendum to the adopted Mitigated Negative Declaration has been prepared in accordance with CEQA Guidelines, Section 15164. The clarified description of proposed operation of the strainers and outlet pipes does not introduce new significant environmental effects, increase previously identified environmental effects, make previously infeasible mitigation measures feasible, or require addition of new mitigation measures.

DWR will release water through the strainers when northern pike eggs and larvae could escape from Lake Davis. Northern pike typically spawn after most ice on Lake Davis has melted in the spring of every year. The resulting larvae will be present during the spring and summer. During other times of the year, when escape of northern pike larvae or eggs is not a concern and northern pike are large enough, outflow may be released either through the strainers or through the emergency outflow (bypass) pipe with the attached grater. DWR will consult with DFG on a seasonal basis to determine the exact timing for strainer or emergency outflow pipe use. The clarified description of the proposed operation does not alter the findings in the original Initial Study or Mitigated Negative Declaration (DWR 2006).

REFERENCES

DWR. 2006. Mitigated Negative Declaration and Initial Study for the Northern Pike Containment System at the Outlet of Lake Davis on Big Grizzly Creek. May. Sacramento CA. Available at <http://www.watershedrestoration.water.ca.gov/fishpassage/>.

FROM PAGES 2 AND 3 OF THE MITIGATED NEGATIVE DECLARATION

**State of California
The Resources Agency
Department of Water Resources**

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Northern pike are a non-native invasive fish species that aggressively feeds on other fish. They were first discovered in Lake Davis in 1994 after having been successfully eradicated from Frenchman Lake in 1991. If they escape Lake Davis and expand throughout the Feather River system, and ultimately into the San Joaquin and Sacramento River Delta, there will be multiple negative consequences.

Since the rediscovery of northern pike in Lake Davis, the Department of Fish and Game has used a variety of methods to control the growth of the population and prevent pike escapement into other water bodies. Additionally, the Department of Water Resources has operated Lake Davis so that the reservoir does not spill through the Grizzly Valley Dam spillway and inadvertently release northern pike or their eggs into the downstream waters. The Department of Water Resources installed “graters” on the Grizzly Dam outlet work pipes in 1996. The graters kill most fish that leave the reservoir through the outlet pipes, but may allow juvenile fish and eggs to escape. Since the population of northern pike continues to grow in Lake Davis, the Department of Water Resources and Department of Fish and Game need greater assurance that northern pike, including adults, larvae, and eggs, do not have the opportunity to move downstream where all possibility of eradication will be lost.

The Department of Water Resources has designed a northern pike containment system for Lake Davis outlet discharges. The discharge from the reservoir outlet works will flow through any of six to eight “strainers” that will remove all material 1.0 mm or larger before discharging into Big Grizzly Creek, which flows into the Middle Fork of the Feather River. The 1.0 mm strainer openings will catch northern pike eggs and larvae, in addition to any adult fish. After passing through the strainer system, the pike-free water will be released into Big Grizzly Creek. The new containment system, once installed, ~~would~~ **may** operate 24 hours a day, year round. If the strainers should cease operating, flow would be released through the emergency outflow pipe. **A new or retrofitted** grater

~~that was formerly attached to the outlet pipe~~ will be fitted onto the end of the emergency outflow pipe.

After further refinement and clarification of the design and proposed operation of the new containment system, DWR determined that it is periodically possible to bypass the containment system and release water through the 36-inch emergency outflow (bypass) pipe without releasing northern pike through the outlet structure. A new or retrofitted grater will be installed onto the end of the emergency outflow pipe to further reduce any chances of releasing live northern pike.

DWR will release water through the strainers when northern pike eggs and larvae could escape from Lake Davis. During other times of the year, when escape of northern pike larvae or eggs is not a concern and northern pike are large enough, outflow may be released through either the strainers or through the emergency outflow (bypass) pipe with the attached grater. DWR will consult with the Department of Fish and Game to determine when releases should preferably be made through the strainers or the 36 inch bypass pipe, respectively.

Within Lake Davis, new bar racks will be installed over the existing bar racks on the mid-level and low-level intakes in Lake Davis. The new bar racks will decrease the current openings to 2 inches. The purpose of the bar racks is to help prevent adult fish and large debris from entering the strainers, and to reduce organic loading in the discharge water.

Each strainer will rest on a concrete pad in the streambed. To construct each concrete pad, loose soil and rock will be removed. The concrete pads will not extend up the stream bank. However, if any one pad needs increased width that is not allowed by the channel bottom, the bank may be cut back to allow for more room. If necessary, gravels may be added to areas between the concrete pads to provide a more even surface between the strainers.

The Cipolletti weir downstream of the stilling basin will be modified to support outlet pipes from the strainers and to keep the creek bed upstream dry. The notch in the weir will be filled with concrete to create a uniform height. The project requires that the entire area upstream of the Cipolletti weir be dewatered. The water in the channel from the outlet works to the Cipolletti weir will be pumped downstream of the Cipolletti weir.

During construction, no discharges into the stilling basin will be allowed, but a bypass pipe will be installed to provide flow to the channel downstream of the Cipolletti weir during construction. There will be two, four-day periods when no flow can be released from the outlet structure: during the installation of the bar racks and during the installation of the bypass pipe. If the bypass pipe does not function correctly, four additional four-day flow cessation periods will be needed during construction. After installation of the strainer system, all outlet discharges will occur through the strainer system downstream of the Cipolletti weir.

FROM PAGE 2 OF THE INITIAL STUDY

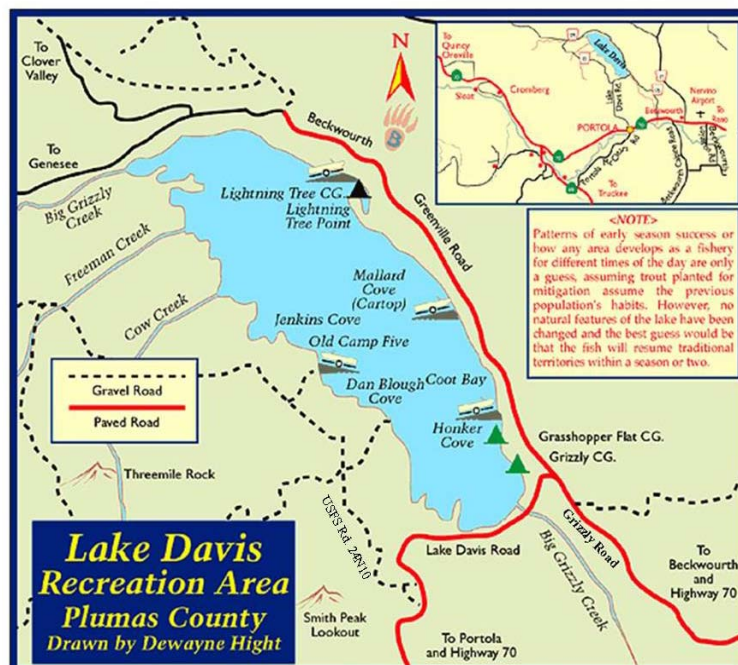
openings will catch northern pike eggs, larvae and adult fish. After passing through the strainer system, the pike-free water is released into Big Grizzly Creek. The new containment system, once installed, ~~would~~ **may** operate 24 hours a day, year round.

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The containment system is designed to operate for five years. We assume that the Department of Fish and Game will eradicate the northern pike population from Lake Davis within that time period. If the Department of Fish and Game does not eradicate pike or chooses instead to manage the pike population within the lake, the containment system, with additional modification, could operate indefinitely.

Figure 1. Map of Lake Davis and vicinity



Initial Study

for

**Northern Pike Containment System at the
Outlet of Lake Davis on Big Grizzly Creek**

Prepared by:

**Division of Planning and Local Assistance
Department of Water Resources
May 2006**

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I. Introduction

Project Objective

The project objective is the installation of a containment system that will prevent northern pike (*Esox lucius*) of any life stage from being released from the Lake Davis outlet¹ into Big Grizzly Creek, and thus downstream into the Feather and Sacramento River system (Figures 1 and 2).

Background

Northern pike are a non-native invasive fish species that aggressively feeds on other fish, including salmon (for details see Environmental Setting, page 12). They were first discovered in Lake Davis in 1994 after having been successfully eradicated from Frenchman Lake and Sierra Valley in 1991. If northern pike escape Lake Davis and expand throughout the Feather River system, and into the San Joaquin and Sacramento River Delta, there will be multiple severe negative consequences:

- State salmon fisheries would be further threatened,
- threatened and endangered species listings could increase,
- the possibility of listed species extinctions could increase.

All of these factors would have severe impacts to water management in the Delta and to State Water Project deliveries. The Department of Fish and Game (DFG) applied rotenone (a naturally derived chemical with piscicidal properties) to Lake Davis in 1997 in an attempt to eradicate the northern pike population. However, northern pike were rediscovered in Lake Davis in 1999. Since the rediscovery, DFG has used a variety of methods to control the growth of the northern pike population in Lake Davis and prevent escapement into other water bodies. Additionally, the Department of Water Resources (DWR) has operated Lake Davis so that the reservoir does not spill through the Grizzly Valley Dam spillway and inadvertently release northern pike or their eggs into the downstream waters. DWR installed “graters” on the Grizzly Dam outlet pipes in 1996. The graters kill most fish that leave the reservoir through the outlet pipes, but may allow escape of juvenile fish and eggs. Severely injured bullhead catfish have passed through the graters (Rischbieter 2006 personal communication). However, their survival was unlikely because of the degree of their injuries. Since the population of northern pike continues to grow in Lake Davis, DWR and DFG need greater assurance that northern pike, including adults, larvae, and eggs, do not have the opportunity to move downstream where all possibility of eradication will be lost.

II. Project Description

DWR has designed a northern pike containment system for the Grizzly Valley Dam outlet at Lake Davis. Water discharged through the outlet will flow through six to eight mesh-basket “strainers,” each containing multiple baskets with 1.0 millimeter (mm) openings (Figure 3). Each basket will be reinforced to prevent bursting. The 1.0 mm

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openings will catch northern pike eggs, larvae and adult fish. After passing through the strainer system, the pike-free water is released into Big Grizzly Creek. The new containment system, once installed, would operate 24 hours a day, year round.

The containment system is designed to operate for five years. We assume that the Department of Fish and Game will eradicate the northern pike population from Lake Davis within that time period. If the Department of Fish and Game does not eradicate pike or chooses instead to manage the pike population within the lake, the containment system, with additional modification, could operate indefinitely.

Figure 1. Map of Lake Davis and vicinity

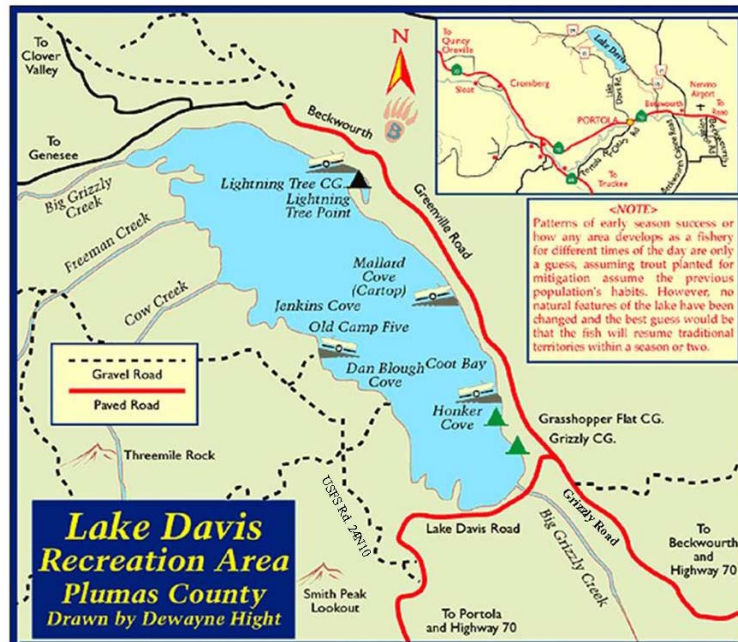


Figure 2. Map of Feather River system with detail of Lake Davis

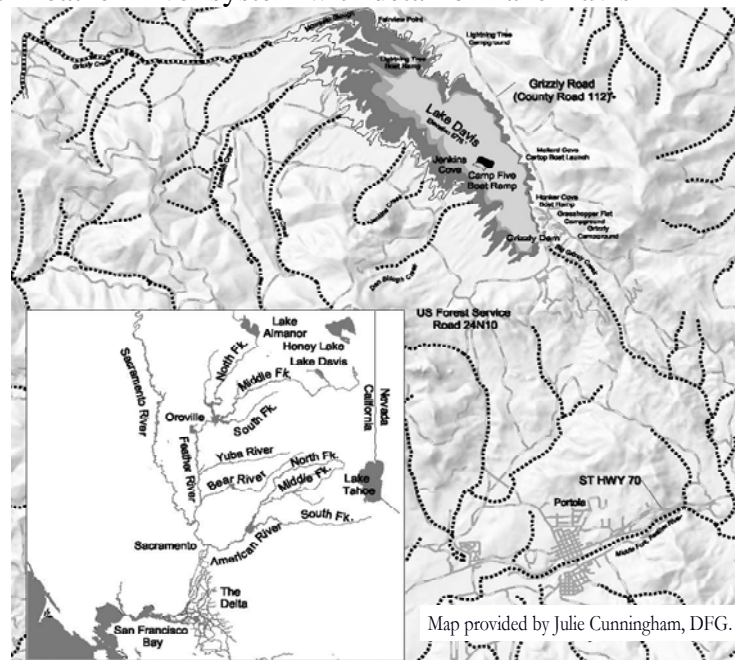


Figure 3. View of typical mesh-basket strainer.

SIMPLEX STRAINER MODEL 90

The Eaton Model 90 Fabricated Simplex Strainer has been designed for manufacturing flexibility. It can be made for pipeline sizes from 1" to 48" in carbon steel or stainless steel although other materials can be specified. Three different ratings of flange connections are commonly available: ANSI Class 150, 300, and 600. Higher pressures are also available. The strainer features an in-line design that adapts to most applications.

Two different types of covers are available. The simplest type is the bolted cover which is simple and cost effective and works well in applications where basket changing is infrequent. A davit assembly can also be specified for larger strainers with heavy covers. This makes it possible for a single person to remove the cover of the strainer.

If the strainer will be opened frequently for basket cleaning, a bolted cover can be less effective because of the time needed to remove and then tighten the bolts. For these applications The Eaton Model 90 Strainer can be ordered with a special, hinged, quick opening cover that is secured by swing bolts. This type of quick opening cover can even be adapted for higher

pressure applications. For medium size strainers, 8" to 16", a bolted slide hinge cover is available. This permits a single operator to open the cover. Eaton strainers can also be designed and manufactured with special covers to meet any application requirements.

There is a special, unique Eaton strainer basket for the Model 90 Fabricated Strainer. The basket has a slant top design which improves the flow through the strainer and results in significantly lower pressure drops than would otherwise be the case. The slant top design results in a more compact basket which weighs less than an ordinary basket and makes it possible for a single person to remove it from the strainer housing. A real labor saving feature when it becomes time to clean or change out the basket. Strainer baskets for the Model 90 are made of stainless steel, although almost any type of material can be specified. Basket perforations from 1/32" up to 1" are available and mesh linings in sizes from 20 to 400 mesh for fine straining applications can be specified.

The Model 90 Fabricated Simplex Strainer will meet the requirements of most simplex strainer applications. It is



8" Model 90 carbon steel with bolted cover.

Basket & Screen Effective Area

Strainer Model	Pipe Size in.	Perforation Size - in.	Nominal Area of Pipe (sq in)	Gross Screen Area (sq in)	Free Area (sq in)	Ratio Free Area to Pipe Area
90	2	5/32	3.35	78	49	14.60
90	3	5/32	7.39	94	59	8.00
90	4	5/32	12.73	151	95	7.46
90	5	5/32	20.00	204	128	6.40
90	6	5/32	28.90	283	178	6.16
90	8	5/32	50.02	478	301	6.02
90	10	5/32	78.85	691	435	5.52
90	12	5/32	111.93	942	593	5.30
90	14	5/32	135.28	1320	832	6.15
90	16	5/32	176.71	1659	1045	5.91
90	18	5/32	223.68	1979	1247	5.57
90	20	5/32	277.95	2513	1583	5.70
90	24*	5/32	402.00	4071	2565	6.38

*Contact Eaton for larger sizes. Dimensions are for reference only.



System Components

The existing 30-inch outlet pipe will be extended downstream to the Cipolletti weir. Water will be diverted off this pipe into six to eight strainers (Figure 3). Water will exit the strainers and flow through a second pipe and discharge downstream of the Cipolletti weir (Drawing 2). During normal operation, all flow will pass through the pipes leading to the strainers.

The 30-inch grater that is currently on the end of the outlet pipe will be placed on the end of the pipe extension at the Cipolletti weir. During emergency flow releases, water will flow through the pipe extension with the grater. In addition, emergency release water will flow through the strainers. Because some emergency release water will only flow through the pipe with grater, small fish and eggs could still escape from the reservoir during an emergency release. Flow to each strainer and through the pipe extension will be controlled manually by a series of valves (Drawing 2 and 5).

At the start of construction, the existing 10-inch stream-release outlet pipe or the 16-inch pipeline will be extended from the outlet building, to the release point downstream of the Cipolletti Weir. The 10-inch or the 16-inch pipe will be used as a temporary release during construction and until the strainers have been tested and are online. A grater will be fitted on the end the temporary release pipe. The grater will kill any larger fish that may be entrained from the reservoir. Small fish and eggs could still escape from the reservoir during the temporary, construction releases. The temporary release pipe will be supported by 2 ft x 2 ft pipe supports in the streambed. The temporary release pipe and supports will be removed once the strainers are online.

Each strainer houses multiple mesh-baskets perforated with 1.0 mm openings within a reinforced steel case. The strainers will be 3 feet in diameter and 5 feet tall. The six to eight strainers will be located within the streambed immediately downstream of the existing outlet's energy dissipating wall and upstream of the Cipolletti weir (Drawing 2 and Photo 1). The strainers will sit upon individual concrete footings constructed on the cleared surface of the existing streambed. The strainers, each fed by a 24-inch line, will have a combined maximum discharge of 200 cubic feet per second (cfs). The strainers will have the capability to discharge 10 to 23 cfs, matching the minimum stream-release requirements.

The strainers and emergency release will discharge immediately downstream of the Cipolletti weir onto existing rock (Drawing 7 and Photo 1). The rock in this area is large enough and in sufficient density to prevent down cutting of the stream and erosion of the bank. We anticipate no significant increase in the siltation of Big Grizzly Creek due to strainer or emergency releases. Existing rock downstream of the Cipolletti weir will stabilize the bank, prevent erosion, and dissipate energy.

Once the strainers are operational, staff will check the strainers daily to determine if the baskets need to be cleaned of debris. If necessary, the debris and waste from the baskets will be removed and taken to the Intermountain Disposal Company's transfer station in Delleker, CA (one mile west of Portola on Highway 70) and trucked to a county landfill in Lockwood, Nevada. Redundant strainers and extra baskets will prevent interruption in desired flow releases. The mesh-baskets will be removed from the strainer casing for

cleaning using a small, hand-operated hoist trolley. A steel platform will also be erected around the strainers to provide access to the baskets, valves and pressure gauges (Drawing 7).

There are four existing seepage holes that release 4-15 gallons per minute (gpm) from Grizzly Valley Dam. The holes release water that collects in the toe drain along the downstream toe of the dam and are necessary to maintain the integrity of the dam. The seepage holes will be manifolded into a pipe that will extend downstream to the Cipolletti weir and discharge the seepage water onto existing rock.

The emergency discharge pipe, the strainers stream release pipe, and the seepage flow pipe will rest on supports anchored in the streambed (Drawing 8). The total discharge from the strainers will be measured using either acoustical or ultrasonic flow meters. After installation of the strainer system, all discharges will occur downstream of the Cipolletti weir (Drawing 9).

Power currently at the site is enough to run the strainer system. A conduit will be added to the existing circuit in the control building adjacent to the outlet to provide power for external lighting and flowmeters (Drawing 11).

New bar racks will be installed over the existing bar racks on the mid-level and low-level intakes in Lake Davis. The new bar racks will decrease the current openings to 2 inches. The purpose of the bar racks is to prevent large fish and debris from entering the strainers, and to reduce organic loading in the discharge water.

Project Construction

Construction activities at the dam will begin in July 2006. Construction will occur 10 hours per day, 6 days per week. Construction is expected to last until mid-November, 2006.

Outflow from the dam will be shut off two to six times during the construction period. Each flow suspension period will last no more than four consecutive days and will be performed in conformance with DWR's water rights permits (15254, 15255) and the associated Grizzly Valley Dam Operations Agreement of March 31, 1994. A previous study showed that suspending outflow from the Dam did not completely dewater Big Grizzly Creek (DWR 2006). The following activities will require the outlet flow to be shut off:

1. Installation of the bar racks on the inlets (for safety reasons), and
2. Installation of the flow bypass line.

These activities will be scheduled non-contiguously to prevent the outflow from being shut off for more than four consecutive days. For installation of the bar racks, the flow will only be off when the divers are working during four days. Flow will be turned on during night hours and when the divers are on the surface. For installation of the flow bypass line, two days of flow cessation are anticipated. Other in channel construction activities (installation of strainers, installation of footings, etc) may also require flow to be shut off if the bypass line is not functioning properly. However, with the bypass line

releasing flow, only two flow cessation periods will be needed (one four-day period, and one two-day period).

To create room for the strainers and the piping, the existing energy dissipation wall will be modified. The contractor will use a concrete saw to cut the concrete dissipation wall, and will obtain the water necessary to operate the saw from offsite. The offsite water will be clean and non-chlorinated. All cement pieces removed from the dissipating wall will be taken to an offsite disposal area. The sill immediately downstream of the energy dissipating wall will be raised to support the piping. The area from the former outlet to the sill will be filled with gravel and will be capped with a 1-2 inch slurry of concrete to bring the bottom level with the surface of the creekbed. This is to ensure proper drainage and to prevent any standing water that would attract mosquitoes.

To construct the strainer concrete footings in the streambed, loose soil and rock will be removed. The concrete will provide footing for each strainer and extend downstream of the existing outlet structure to the Cipolletti weir. The concrete footings will not extend up the stream bank. However, if any one footing needs increased width that is not allowed by the channel bottom, the bank may be cut back to allow for more room. The size of the footings for each of the strainers will be 4 ft x 4 ft x 2 ft deep. If necessary, gravel may be added to areas between the concrete footings to provide a more even surface between the strainers. The gravel would be added to increase safety for workers in the channel. The platform and hoist system will provide access to the strainers for maintenance. Three down-facing, 250 watt pole-mounted lights with photocells (on when dark), will provide light to the platform (Drawings 8-11).

The Cipolletti weir downstream of the stilling basin will be modified as necessary to support the outlet pipes and to keep the area upstream dry. The notch in the weir will be filled with concrete to create a uniform height (Photo 1, and Drawings 6 and 7). No discharges into the basin upstream of the Cipolletti weir will be allowed. Additionally, holes will be drilled into the Cipolletti weir to allow for drainage of the basin by gravity flow during precipitation and snow-melt.

The emergency discharge pipe, the strainers' stream release pipe, and the seepage flow pipe will rest on supports anchored in the streambed (Drawing 5). The supports for the pipes will be 2 ft x 2 ft.

To reduce the loading on the strainers, larger fish and debris will be prevented from escaping the lake with the installation of new, smaller opening, intake bar racks. The new 2-inch by 2-inch mesh opening bar racks will be installed via a floating barge and will be lowered to the appropriate intake by winch. Construction divers will bolt the new bar racks to the existing ones. Attachment to the existing concrete is not anticipated, but if found necessary, holes will be drilled into the concrete and self-anchoring bolts will be utilized to affix the bar racks.

Construction materials such as pipe segments, strainers, and concrete will be delivered to the site from California State Highway 70 via Lake Davis Road. Lake Davis Road goes north from Portola, turns east and crosses over the top of Grizzly Valley dam. The road then meets Grizzly Road, which returns south back towards California State Highway 70.

From Lake Davis Road, the project area at the outlet is accessed via a dirt road going south from Lake Davis Road on the east side of the dam (Photo 2). Construction equipment will also be delivered to the site via these routes. The following trucks and equipment will be utilized: concrete trucks, dump trucks, loaders, backhoes, tractors with flatbed trailers, and assorted personnel vehicles. The concrete will arrive as ready-mix from Portola. A Bobcat loader may be used to move materials to areas in the stream channel.

During non-work periods (night-time, holidays, Sundays, etc.) the equipment and vehicles will be stored at the parking area near the outlet and along the access road (Photo 2). Equipment (backhoes, trucks, etc.) that may have the potential to leak oil or other pollutants and contaminants will have containment devices to prevent contaminants from entering the environment. All contractors will follow a set of Environmental Protection Guidelines as determined by DWR and set-forth in the contract specifications. The Environmental Protection Guidelines describe the requirements for the conservation and protection of environmental resources at the work site during and as the result of construction activities. All construction activities shall be in accordance with environmental and regulatory permits issued for the project and all contractors will be held responsible for any violations as prescribed by law. All contractors will be responsible for the control of construction activities, maintenance of equipment, and conduct of their employees at the work site to reduce or eliminate identified environmental impacts. For more information on the specifics of the Environmental Protection Guidelines, see attached document

For details on the schematics, refer to the Engineering Drawings at the end of the document on pages 46-56.

Photo 1. Location of northern pike containment system components.

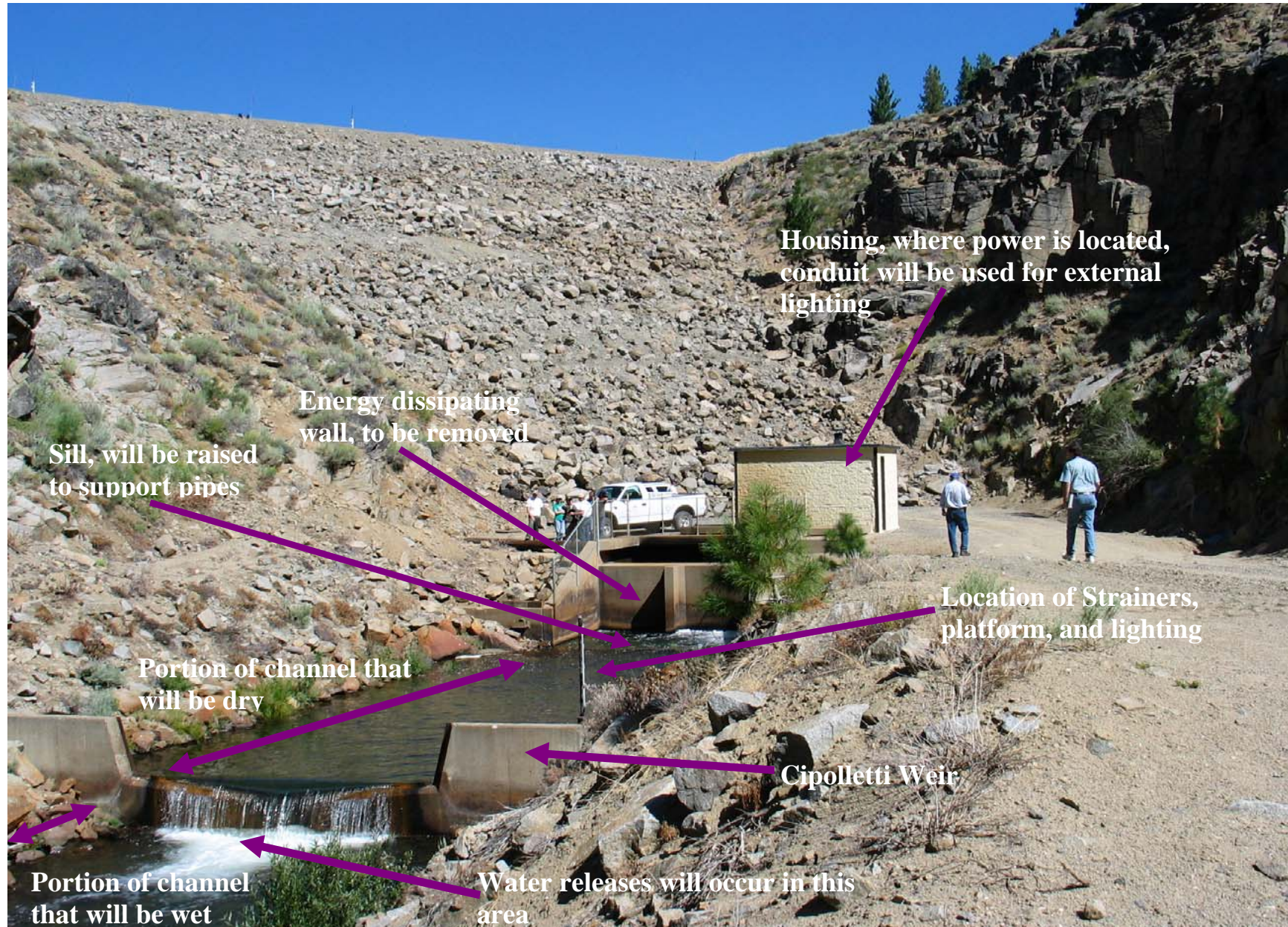
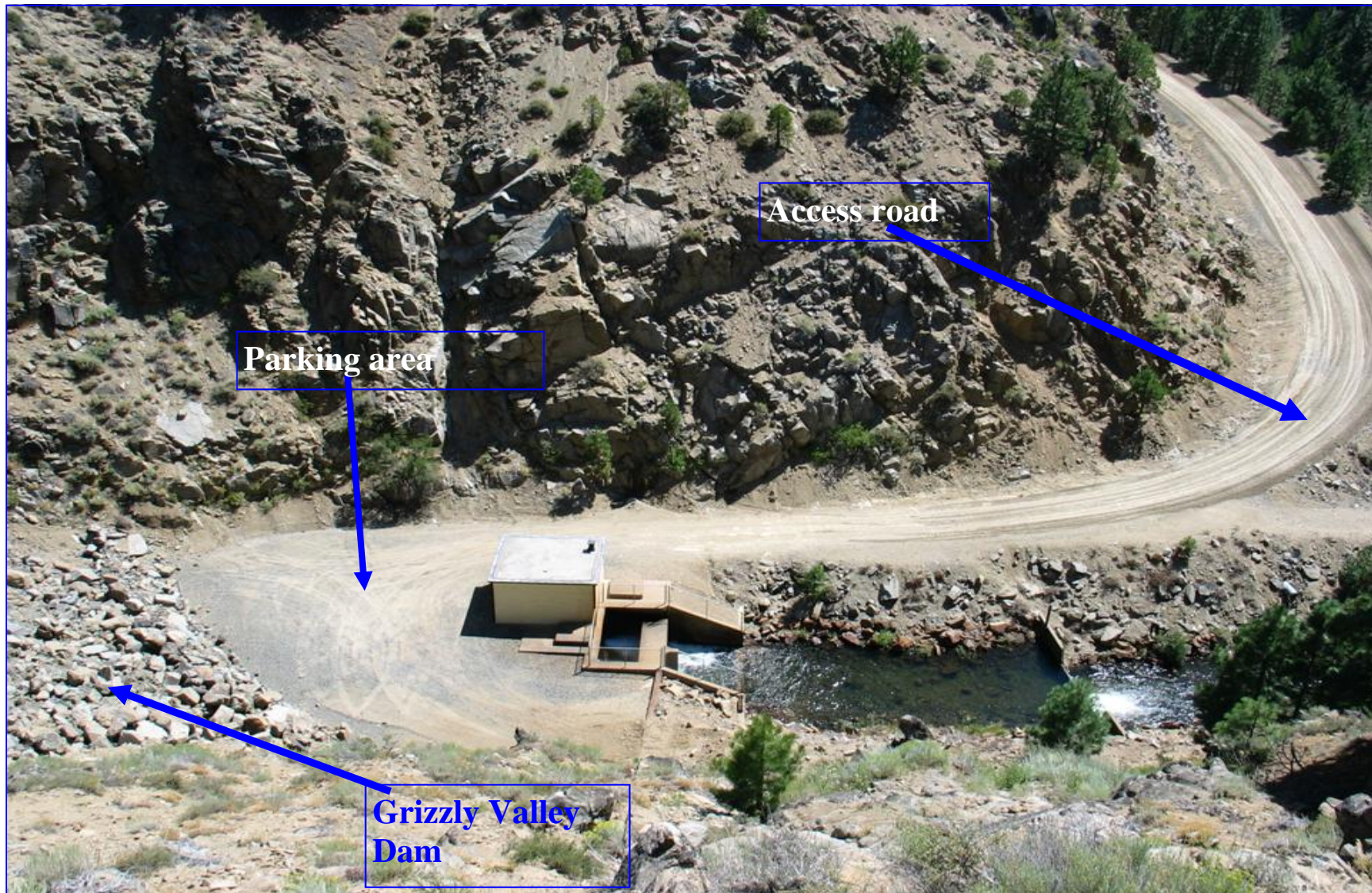


Photo 2. Overhead view of parking area, outlet structure and access road.



Permits Required

Federal Laws

Clean Water Act (33 United States Code 1251-1376)

Section 404

Section 404 of the Clean Water Act establishes a permit program administered by U.S. Army Corps of Engineers (ACOE). The Act regulates the discharge of fill material into waters of the United States, including wetlands. ACOE also administers a Nationwide Permit Program to streamline permitting for certain types of activities that have only minimal impacts to the aquatic environment. Projects must comply with the terms of General and Regional Conditions to be authorized under Nationwide Permits (NWP). A Pre-Construction Notification will be submitted to ACOE for authorization of the project under NWP 18: Minor Discharges and NWP 3: Maintenance.

Section 401

Applicants for a federal permit allowing activities that may result in a discharge to navigable waters or their tributaries must obtain State certification that the discharge complies with other provisions of the Clean Water Act, and will not violate State and federal water quality standards. The Regional Water Quality Control Boards administer the certification program in California. An application for 401 Certification of the project will be submitted to the California Regional Water Quality Control Board, Central Valley Region, once California Environmental Quality Act (CEQA) compliance is completed. DWR will file our intention to obtain a general NPDES permit for the construction activities and the contractor will propose a Stormwater Pollution Prevention Plan.

State Laws

California Environmental Quality Act (Public Resources Code 21000 et seq.)

CEQA applies to actions directly undertaken, financed, or permitted by State lead agencies, and establishes State policy to prevent significant and avoidable damage to the environment. It requires any public agency to disclose the environmental impacts of its projects to the public through appropriate environmental documentation. A Mitigated Negative Declaration and Initial Study are being submitted to the State Clearing House.

Streambed Alteration Agreement (Fish and Game Code 1600 et seq.)

DFG code section 1602 requires State and local government agencies to notify the DFG before beginning construction projects which would divert, obstruct or change the natural flow or bed, channel or bank of any river, stream, or lake. Preliminary notification and project review generally occurs during the environmental process. When an existing fish or wildlife resource may be adversely affected, DFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a

Streambed Alteration Agreement. DWR will submit an application for a Streambed Alteration Agreement.

III. Environmental Setting

Location

Grizzly Valley Dam was constructed from 1966 to 1968. It impounded Big Grizzly Creek creating Lake Davis as part of the State Water Project. There are three main tributaries that flow into Lake Davis: Big Grizzly, Cow, and Freeman Creeks. Lake Davis is located in Plumas County about six miles north of Portola via Lake Davis Road. It has an elevation of 5775 ft when full to its spillway elevation (Figure 2). It has a surface area of 4,025 acres when full, a capacity of 84,371 acre-feet, an average depth of approximately 20 ft, and a drainage area of about 44 square miles. Lake Davis was created to provide recreation opportunities and water supply.

The construction will occur at the downstream base of Grizzly Valley Dam in Plumas County (Photo 2).

Climate

The climate of the Lake Davis area is characterized by warm, dry summers and cold, wet winters. The Lake Davis area averages approximately 23 inches of precipitation annually. Precipitation normally occurs from October through April and peaks in January. Most precipitation comes in the form of snow, especially at the higher elevations. High temperatures during the summer months (June – August) are usually in the 80 degree Fahrenheit (°F) range, and in the winter (November – February), day time temperatures are in the 20 °F range.

Vegetation and Special Status Plant Species

Vegetation in this area is characterized as east-side pine habitat consisting of dry open forested uplands, scattered sagebrush scrub, and open grassy meadows. Forest species include Jeffrey pine, Ponderosa pine, and Douglas fir. Dominant shrub species include sagebrush, antelope brush, and yellow rabbitbrush. Slopes in the project area below the dam are fairly steep with volcanic rock outcrops and rocky soils. A narrow strip of montane riparian habitat occurs along Big Grizzly Creek downstream of the dam with scattered willows and sedge along the water's edge and occasional aspen nearby. Much of the project area is disturbed and barren of vegetation (Photos 1 and 2).

Ten special status plant species have potential to occur in the area based on a search of the DFG's California Natural Diversity Database and the U.S. Plumas National Forest Sensitive Plant List (Table 1). Quads selected for this search included Blairsden, Crocker Mountain, Grizzly Valley, and Portola.

Fish

Big Grizzly Creek has a notable wild trout fishery, comprised of brown trout and rainbow trout. Other fish species that may be present in Big Grizzly Creek include the Sacramento pike-minnow, Sacramento sucker, speckled dace, riffle sculpin, and hardhead. Crayfish have also been observed in Big Grizzly Creek.

Wildlife

The forest in the vicinity of the project site provides habitat for wildlife species typical of the California montane region. Common species include deer, coyote, bobcat, and raccoon. Birds include a variety of raptors and songbirds. During field reconnaissance surveys by DWR biologists the following species of special status were observed in the project vicinity: American white pelican, double-crested cormorant, olive-sided flycatcher, white-headed woodpecker, osprey, southern bald eagle, and yellow warbler. Eight species protected under the State or federal Endangered Species Acts, including two candidate species, may utilize habitat in the project vicinity (Crocker Mountain Quadrangle, Grizzly Valley Quadrangle, and Portola Quadrangle) at some point in their life stage. These species are the American peregrine falcon, bank swallow, greater sandhill crane, fisher, southern bald eagle, willow flycatcher, mountain yellow-legged frog, California wolverine, and Sierra Nevada red fox. The USFWS species list for the Crocker Mountain Quadrangle also includes Delta smelt which does not occur in Big Grizzly Creek.

Table 2 shows special status wildlife species predicted to occur in habitat types in the general project vicinity by the California Wildlife Habitat Relationship (CWHR)³.

³ CWHR is a state-of-the-art information system for California's wildlife. CWHR contains life history, management, and habitat relationships information on 675 species of amphibians, reptiles, birds, and mammals known to occur in the state. More information on CWHR can be found at <http://www.dfg.ca.gov/whdab/html/cwhr.html>.

Table 1. Special status plant species with potential to occur in project area.

Species/common name	Status Fed/State/CNPS¹/ USFS²	Habitat	Flowering Period
<i>Astragalus lentiformis</i> lens-pod milk-vetch	-/-1B/ Sensitive	Great Basin scrub, lower montane coniferous forest/shallow volcanic soils among sage brush (1450-1925 m)	May-July
<i>Astragalus pulsiferae</i> var. <i>suksdorfii</i> Suksdorf's milk-vetch	-/-2/ Sensitive	Sagebrush flats in eastside pine forest to rocky sagebrush slopes/volcanic sand or gravelly clay (1300-2000m)	May-Jul
<i>Botrychium crenulatum</i> Scalloped moonwort	-/-2	Bogs and fens, moist meadows, and near creeks in lower montane coniferous forest (1500-2670m)	Jun-Jul
<i>Botrychium manganense</i> Mingan moonwort	-/-2	Creek banks in mixed conifer forest (lower montane coniferous forest (1500-2275m)	Jul-Aug
<i>Carex sheldonii</i> Sheldon's sedge	-/-1B/ SI-2	Lower montane coniferous forest (mesic), freshwater marshes and swamps, riparian scrub (1200-1755m)	May-Aug
<i>Ivesia aperta</i> var. <i>aperta</i> Sierra Valley ivesia	-/-1B/ Sensitive	Great Basin scrub, lower montane coniferous forest, meadows and seeps/vernally mesic flats and slopes adjacent to <i>Ivesia</i> mdws, usually volcanic (1300-2100m)	Jun-Aug
<i>Ivesia sericoleuca</i> Plumas ivesia	-/-2/ Sensitive	Great Basin scrub, lower montane coniferous forest, meadows and seeps/vernally mesic flats and slopes adjacent to <i>Ivesia</i> mdws, usually volcanic (1300-2100m)	Jun-Aug
<i>Pyrrocoma lucida</i> sticky pyrrocoma	-/-1B/ Sensitive	Great Basin scrub, lower montane coniferous forest/meadows, alkali clay flats, seeps, often volcanic soils; assoc with <i>Ivesia aperta</i> (600-2000m)	Jul-Aug
<i>Scutellaria galericulata</i> Marsh skullcap	-/-1B/ none	Lower montane coniferous forest (mesic)/meadows and seeps, freshwater marshes and swamps (0-2100m)	Jun-Sept
<i>Utricularia intermedia</i> Flat-leaved bladderwort	-/-2	Bogs and fens, meadows and seeps. Mesic meadows and lake margins (1200-2700m)	Jul-Aug
¹ California Native Plant Society (CNPS): List 1B - plants rare, threatened, or endangered in California and elsewhere; List 2 – plants rare, threatened, or endangered in California but more common elsewhere; List 3 – plants about which more information is needed United States Forest Service (USFS) Plumas Nation Forest: S – Sensitive			

Table 2. CWHR special status wildlife species occurrence prediction for habitat types in the general project vicinity

Common Name	Scientific Name	Status
BIRDS		
American peregrine falcon	<i>Falco peregrinus anatum</i>	SE, FSC, F
American white pelican	<i>Pelecanus erythrorhynchos</i>	CS
bank swallow	<i>Riparia riparia</i>	ST
Barrow's goldeneye	<i>Bucephala islandica</i>	CS
black swift	<i>Cypseloides niger</i>	CS, FSC
black tern	<i>Chlidonias niger</i>	CS
Brewer's sparrow	<i>Spizella breweri</i>	FSC
California gull	<i>Larus californicus</i>	CS
California horned lark	<i>Eremophila alpestris</i>	CS
California spotted owl	<i>Strix occidentalis caurina</i>	F,B,CS, FSC
Caspian tern	<i>Sterna caspia</i>	FSC
common loon	<i>Gavia immer</i>	CS
Cooper's hawk	<i>Accipiter cooperi</i>	CS
double-crested cormorant	<i>Phalacrocorax auritus</i>	CS
flamulated owl	<i>Otus flammeolus</i>	FSC
golden eagle	<i>Aquila chrysaetos</i>	CS, FSC, B, SFP
greater sandhill crane	<i>Grus canadensis tabida</i>	ST, SFP, F
Lewis' woodpecker	<i>Melanerpes lewis</i>	FSC
Merlin	<i>Falco columbarius</i>	CS
northern goshawk	<i>Accipiter gentilis</i>	CS, F
northern harrier	<i>Circus cyaneus</i>	CS
olive-sided flycatcher	<i>Contopus borealis</i>	FSC
Osprey	<i>Pandion haliaetus</i>	CS
prairie falcon	<i>Falco mexicanus</i>	CS, FSC
sharp-shinned hawk	<i>Accipiter striatus</i>	CS
short-eared owl	<i>Asio flammeus</i>	CS
southern bald eagle	<i>Haliaeetus leucocephalus leucocephalus</i>	FT, SE
Vaux's swift	<i>Chaetura vauxi</i>	CS
white-faced ibis	<i>Plegadis chihi</i>	CS
white-headed woodpecker	<i>Picoides albolarvatus</i>	FSC
willow flycatcher	<i>Empidonax traillii brewsteri</i>	SE,F
yellow warbler	<i>Dendroica petechia</i>	CS
AMPHIBIANS		
foothill yellow-legged frog	<i>Rana boylei</i>	CS, F,B
mountain yellow-legged frog	<i>Rana muscosa</i>	FC
REPTILES		
western pond turtle	<i>Clemmys marmorata</i>	CS, FSC, F, B
MAMMALS		
American badger	<i>Taxidea taxus</i>	CS
California wolverine	<i>Gulo gulo</i>	ST
Fisher	<i>Martes pennanti pacifica</i>	FC, B, F
pallid bat	<i>Antrozous pallidus</i>	CS, F, B
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>	ST
Townsend's big-eared bat	<i>Corynorhinus townsendii townsendii</i>	FSC, F, B
STATUS KEY		
FE-federal endangered, FT-federal threatened, FSC-federal species of concern SE-State endangered, ST-State threatened, CS-California species of concern B-BLM sensitive F-Forest Service sensitive SFP-State fully protected FC-federal candidate		

IV. Potential Environmental Consequences

Introduction

Organization of this chapter is based upon the environmental checklist developed by the Governor's Office of Planning and Research and is divided into the different subject areas found in the checklist. Each section of the chapter begins with a portion of the environmental checklist outlining criteria used to determine significance of potential impacts. Subsections describing the affected environment and the potential environmental consequences of the project are provided to specify how each aspect of the environment might be affected by the project. Standards for determining significance of potential impacts are further elaborated in the text.

Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The top of Grizzly Valley Dam provides vistas of Lake Davis and the canyon downstream that contains Big Grizzly Creek.

Standards

Project impacts would be considered significant if they would permanently degrade the existing visual character of the project site surroundings.

Environmental Consequences

During the construction period, the view downstream at the outlet may be impacted, but this impact will be minimal and temporary. After construction, the new facilities at the outlet will be visible. The strainers, platform, and lighting will be in an area at the outlet that is denuded of vegetation, graded, and already contains an outlet structure (Photo 1). The lights will focus downward and will provide light to the platform only. The impacts

to scenic views will be less than significant due to the location of the structures and lighting. There will be a short-term visual impact during construction from the increased traffic, and there will be some necessary removal of vegetation at the project site. However, the negative visual impact will not be significant and the long-term impact of the project, after re-vegetation, will be negligible.

Agricultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The area in and around Big Grizzly Creek near the outlet from Lake Davis does not currently support agricultural activities and is not on prime farmland, unique farmland or farmland of statewide importance.

Standards

Project impacts were considered significant if they would conflict with existing zoning for agricultural use or involve changes that could result in conversion of farmland to non-agricultural use.

Environmental Consequences

No impacts to agriculture are associated with implementation of the project.

Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

Affected Environment

California is divided geographically into 15 air basins to manage the air resources of the State regionally. The project site is located within the Mountain Counties air basin, and within the jurisdiction of the Plumas County. The monitoring station for Plumas County is located in the city of Quincy. At this monitoring station, between 1986 and 1998, there was only one incidence where air quality exceeded State standards, and only twice did it exceed federal standards. Lake Davis is in a less populated area than Quincy, thus the air quality should typically be better than conditions at the monitoring station in Quincy.

Standards

The California Air Resources Board (ARB) has developed guidelines that help determine the significance of temporary and intermittent air quality effects resulting from construction activities. The ARB requires best available control technology requirements, and has a daily emission limit of 80 pounds per day of particulate matter smaller than 10 microns, an annual limit of 10 tons per year for any criteria pollutant, and record keeping and reporting requirements. Air quality impacts from the project would be considered significant if 80 pounds or more of PM₁₀ were to be generated daily from construction activities.

Environmental Consequences

The Northern Pike Containment Project will generate substantially less than 80 pounds per day of particulate matter and 10 tons per year of any ozone precursor. Construction activities that generate 80 pounds per day or more of PM₁₀ are large-scale developments with extensive grading. This project scale is too small to generate pollutants that would concern the ARB or adversely affect the local environment.

There will be an increase in diesel traffic during construction that will create diesel odors. Since the construction period is short, any impacts created will be less than significant. There may also be odors from dead fish when debris is hauled away to the offsite disposal site.

DWR conducted studies to determine numbers of fish passing through the graters. During daily sampling periods up to 40 dead fish of various sizes and various states of dismemberment would exit the reservoir (Rischbieter 2000). However, it was difficult to count exact numbers of fish exiting the reservoir because fish pieces were swept downstream. In addition, the pieces were in various states of decay, indicating they had been dead for different lengths of time. We anticipate small numbers of fish in the strainers for the following reasons:

- Small numbers of fish were captured during grater sampling, and
- The installation of the bar racks on the inlets will block all fish and debris greater than 2 inches wide.

Therefore, odors associated with this project should be minimal and the impact less than significant.

Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, U.S. Fish and Wildlife Service or National Marine Fisheries Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game, U.S. Fish and Wildlife Service or National Marine Fisheries Service?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

☐☐☐

X

Affected Environment

The project is designed to minimize and avoid impacts to biological resources. Virtually the entire project footprint (including construction staging and access) is located on barren or previously-disturbed areas (Photos 1 and 2). Additionally, temporal or spatial avoidance measures were incorporated into the project to minimize short and long-term impacts to biological resources including:

- Summer construction to avoid impacts to nesting birds and spawning rainbow trout
- No removal of mature trees or snags
- Minimization of the project footprint (spatial impacts)
- Minimum construction period (temporal impacts)
- Minimization of disturbance to riverine and riparian habitat
- Minimize direct habitat loss during project design and construction
- Retention of screening vegetation to limit indirect habitat loss and wildlife disruption/displacement
- Retention of key wildlife habitat elements including snags, woody dead and down material, live trees containing cavities, and shrub cover
- Retention of mature trees and avoidance of non-native landscaping
- Revegetation of areas of disturbed soil
- Minimizing the number of flow cessation periods
- Installation of a flow bypass line
- Installation of a block net in Big Grizzly Creek
- Release of about 0.5 cfs flow augmentation during flow cessation periods

Standards

The project must comply with State and federal Endangered Species Acts as well as Sections 401 and 404 of the federal Clean Water Act which provide protection for aquatic and wetland resources, and **DFG's Streambed Alteration Agreement**. DFG Code Section 5937 provides protection to fisheries by requiring that the owner of any dam allow sufficient water at all times to pass the dam to keep in good condition any fisheries that may be planted or exist below the dam.

Environmental Consequences

The project design avoids habitats of species protected under the State and federal Endangered Species Acts. No direct or indirect impact to any species protected under the State or federal Endangered Species Acts will occur. No impacts to any special status plant species will occur.

A functional fish containment system will provide added insurance that northern pike do not escape Lake Davis through the outlet and impact downstream populations of State

and federally-listed species. The containment system will be more effective in preventing small fish and eggs from leaving through the Lake Davis outlet than the graters and will not significantly change existing conditions in the creek downstream of the Lake. The trout fishery downstream of Lake Davis will not be affected by the presence of the strainers. Currently, there is no recruitment of trout in Big Grizzly Creek from Lake Davis. The trout fishery will benefit from the increased insurance that northern pike do not escape from Lake Davis through the outlet to prey on the trout.

Impacts to aquatic and wetlands habitats are minimized to the extent possible through project design. All wetland disturbance is limited to previously disturbed portions of the channel which currently lack functional wetland and riparian habitat (Photo 1). Total disturbance footprint in the channel is 0.06 acres and includes removal of a small amount of emergent wetland vegetation (mainly sedges) and a small Ponderosa pine (< 4" dbh). This removal will take place in the area where the strainers and new piping will be constructed. The Ponderosa pine will be replaced after project completion. Although no riparian vegetation will be removed by the project, DWR will plant willow cuttings downstream of the Cipolletti weir to the pedestrian bridge.

Construction related flow reductions may adversely affect fisheries and aquatic habitats immediately downstream from the project. In order to minimize adverse affects on fish and aquatic habitats, the number of flow cessation periods was reduced. This will be possible because of the installation of a flow bypass line. The flow bypass line will release a minimum of 10 cfs downstream of the Cipolletti Weir during the construction period. In addition, flow in Big Grizzly Creek will be augmented by using a screened portable pump to draw water from Lake Davis. This will provide around 0.5 cfs to the creek and should further minimize already less than significant impacts.

There will be two periods when no flow will be released from Grizzly Valley Dam. Flow will be shut off during the installation of the bar racks when divers are underwater. This flow shut off period should last no more than four days and is necessary for diver safety. Flow will also be shut off for two days during installation of the bypass line. If the bypass line does not function properly, up to four additional flow shut off periods may occur.

DWR and DFG monitored the effects of a four-day flow reduction period in October 2004. The monitoring indicated that measurable groundwater and other seepage emerges immediately below Grizzly Valley Dam and appears sufficient to maintain continuity of stream flow throughout Big Grizzly Creek downstream of the Dam (DWR 2006). A hillside spring emerges from the meadow complex located about 150 yards downstream from the dam outlet structure and provides surface water flow to the stream channel, allowing the downstream fishery to survive short-term flow reductions. Upstream of this surface water input, fisheries may be stressed due to decreased dissolved oxygen concentrations. To avoid fisheries mortality within the three pools within this reach, fish will be removed via electrofishing and placed in Lake Davis or further downstream in Big Grizzly Creek during each construction related flow reduction. The relocation destination will be consistent with DFG's Streambed Alteration Agreement. A block net will be installed in Big Grizzly Creek to prevent fish from moving upstream during

flow cessation periods. In addition, spring flow in Big Grizzly Creek will be augmented by using a screened portable pump to draw water from Lake Davis. This will provide around 0.5 cfs to the creek and should further minimize already less than significant impacts. Trout populations immediately downstream of the outlet structure will likely be reduced long-term as the artificial food source provided by the fish grater will be permanently curtailed.

We will be reducing fish habitat when we permanently dry up the creek from the dam to the Cipolletti Weir (55 ft). Fish are occasionally found in this area; however, this area is a highly disturbed, artificial pool. The impact from this loss of stream habitat will be less than significant.

Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in ' 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to ' 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

DWR is conducting a cultural resources study in compliance with Section 106 of the National Historic Preservation Act for the CWA 404 permit. DWR requested a search of records maintained at the Northeast Information Center of the California Historic Resources Information System at California State University Chico and from the Native American Heritage Commission. The results of the record search found that no archaeological sites have previously been recorded in the project area nor have any archaeological surveys been conducted.

The entirety of this area was extensively disturbed during dam construction. A DWR archaeologist completed an onsite survey of the project area and found no cultural resources. A report will be prepared to document the findings of the survey. Once the report is completed it will be available upon request.

See pages 44 and 45 for copies of the information request letters.

Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The reservoir behind the dam filled a former lake basin which was drained in the geologic past when Big Grizzly Creek eroded its present channel at the dam. Granodiorite, which has been locally intruded by andesite dikes, was exposed in the dam and spillway foundations and underlies lake sediments in the reservoir area. Quality of the granodiorite ranges from soft and decomposed to hard and fresh.

Volcanic rock may also be encountered downstream of the dam site. Volcanic rock occurs as Sierran andesite and basalt mudflow, ashflow, and breccia layers and lenses. Volcanic rocks are generally red-brown to gray-green, intensely to slightly weathered, moderately hard to hard, moderately strong to strong, basaltic andesite.

The project site is located about eight miles east of the Mohawk Valley Fault and 16 miles west of the Honey Lake Fault Zone. Both of these faults are presumed active, and the project site is in a seismically active area. A magnitude 5.6 earthquake occurred on an unnamed fault near Portola in 1959. The site would be expected to experience ground shaking from nearby earthquakes.

Standards

The site was reviewed for active faults against the published Alquist-Priolo Fault Zone maps and the USGS Quaternary Fault database. Impacts were assed by a Registered Professional Geologist.

Environmental Consequence

The project site would be expected to experience ground shaking from nearby earthquakes. The dam and appurtenant structures have been designed to with stand the expected shaking. The project site is located at the base of a very steep slope and there could be a minor rockfall hazard during construction.

Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Be located on a site which is included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

Hazardous chemicals used during project implementation could include, but are not limited to, fuel, motor oil, and lubricants for construction equipment.

Standards

The threshold for determining significance was based on professional judgment as to whether or not the handling of hazardous materials during the project would pose a significant hazard to the public or the environment.

Environmental Consequences

If hazardous chemicals such as fuel or motor oil were to be mishandled, leaked, or spilled, hazardous chemicals could potentially result in contamination of the soil or water

in the project area. The contractors will all have to sign forms stating that all the necessary precautions are being used based on DWR, State, and federal guidelines to ensure hazardous materials do not significantly impact the soils, water, public, and working personnel in the project area. Representative with Plumas County have been contacted and are aware of the project. Since the construction is temporary, Plumas County does not require any permits regarding hazardous materials. Contractors will provide spill containment for vehicles, and the containment will adhere to all required State and federal standards.

Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
d) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
e) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
g) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
h) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
i) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
j) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
k) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

Big Grizzly Creek is impounded by Lake Davis immediately upstream of the project area. Big Grizzly Creek converges with the Middle Fork Feather River about six miles downstream of Grizzly Valley Dam. There is one impoundment downstream of the project site at the Grizzly Ice Pond, formed by Grizzly Creek Dam. The pond behind this dam is currently used for summer camp recreation ([see Recreation section](#)).

Creek flows downstream of Grizzly Valley Dam are established by a memorandum of agreement (MOA) between DWR, DFG, and the U.S. Forest Service. The MOA stipulates that minimum releases will be determined annually on May 1, and will be dependent upon actual or anticipated maximum volume of Lake Davis during the May-June period. Overall minimum release to Big Grizzly Creek (regardless of reservoir volume) is 10 cfs. DWR's Water Rights Permits allow reduction of Grizzly Valley Dam discharge below the normal 10 cfs minimum for the purposes of fishery data gathering, instream construction, or other unspecified purposes, for a period not to exceed five days. Such action will be preceded by verbal notification of Region/District staff between both agencies.

There are numerous wells in the Big Grizzly Creek watershed south of Lake Davis including at the Grizzly Lake Resort development and the Plumas County Flood Control and Water Conservation District treatment plant. North of the dam, the U.S. Forest Service operates one water system that supplies Grasshopper Flat and Grizzly Campgrounds and Honker Cove Boat Ramp.

The aquifer in the vicinity of Lake Davis does not appear to be confined and the hydraulic gradient generally follows the topography. This means that the lake receives water from the surrounding ground water, not vice versa. Because the ground water to the west and east is higher than lake level, water cannot flow uphill from the lake to these locations.

Water levels in wells below the dam are lower than the water surface in Lake Davis. In this region, however, studies indicate water flowing to these wells most likely comes down from Crocker Mountain (DFG 2005).

Standards

Impacts to hydrology and water quality would be considered significant if they conflicted with the RWQCB Basin Plan objectives.

Environmental Consequences

- a. The project would involve interruption of flows into Big Grizzly Creek twice during construction. The bar rack construction will create short shut off periods when the divers are working on the inlets. Construction of the bypass line is anticipated to last two days. If the bypass line is not operating properly, flow may have to be shut off up to four more times for instream construction activities. Each interruption will last no more than 4 days. The bypass line will release a minimum of 10 cfs. A study conducted by DWR in 2005 indicates that when flows in Big Grizzly Creek were stopped for a period of four days, dissolved oxygen decreased significantly in the few pools nearest the Dam, however, it decreased only slightly at more distant sampling points.

Once operational, all water discharged from the Dam will be passed through strainers in order to prevent downstream passage of adult and juvenile fish, larvae, and eggs of northern pike. The material caught in the strainers will be disposed of offsite. The RWQCB has determined that the project will not require a site specific NPDES permit because no discharge of waste to surface waters is planned during the operation of the strainers.

The project will follow a set of guidelines imposed by the RWQCB for turbidity, settleable solids, visible oil, visible grease, and foam. In the event the project results in an increase in any of the guidelines, a monitoring program will be initiated during any instream construction activities and the RWQCB will be notified.

- b. No impacts to groundwater or groundwater recharge will be incurred from this project.
- c. The creek will be dry from the dam to Cipolletti weir. This is anticipated to have a less than significant impact to the drainage pattern.
- d. Less than 25 cy of material will be introduced into and removed from Big Grizzly Creek during this project. Less than 0.1 acre of waters of the U.S. will be impacted and less than 0.01 acre of emergent wetland vegetation will be removed. Although no riparian vegetation will be removed by the project, DWR will plant willow cuttings downstream of the project site.
- e. The portion of the creek downstream of the outlet to the Cipolletti weir will be dry during the duration of the project. There will be holes punched into the bottom of the Cipolletti weir to allow for drainage when rainfall or snowmelt wet this portion of the creekbed. These alterations are not expected to change the existing drainage pattern. Additionally, no substantial changes to the existing drainage pattern from the maximum of six occurrences of flow cessation necessary during construction. Each flow cessation period will last up to 4 days. Flow will be shut off for the first 150 yards. At about 150 yards downstream of the outflow pipe, there is a spring that provides flow to Big Grizzly Creek and natural runoff also adds to creek flow.
- f. No additional runoff water will be introduced into Big Grizzly Creek from this project.
- g. As noted in “a” above, dissolved oxygen may decrease immediately downstream during cessation of flows during the instream work. A hillside spring emerges from the meadow complex located about 150 yards downstream from the dam outlet structure and provides surface water flow to the stream channel allowing the downstream fishery to survive short-term flow reductions. Upstream of this surface water input, fisheries may be stressed due to decreased dissolved oxygen concentrations. To avoid fisheries mortality within the three pools within this reach, fish will be removed via electrofishing and placed in Lake Davis or further downstream in Big Grizzly Creek (to be consistent with DFG’s Streambed Alteration Agreement) before each construction-related flow reduction. Placing these fish in downstream pools will add stress to fish in these areas that will already be stressed due to crowding, decreased DO, and increased temperatures. Additionally, a block net will be placed in the stream channel downstream of the three pools and upstream of where the spring flows into Big Grizzly Creek. The block net will prevent fish from swimming upstream during flow cessation periods. In addition, flow in Big Grizzly Creek will be augmented by using a screened portable pump to draw water from Lake Davis. This will provide around 0.5 cfs to the creek and should further minimize already less than significant impacts.
- h. No housing will be placed within a 100-year flood hazard area.

- i. Although this project involves placing structures within Big Grizzly Creek, these are immediately downstream of the dam and are designed to handle flows up to approximately 200 cfs, the capacity of the controlled outlet works. Releases higher than 200 cfs are normally avoided, and occur over the spillway which is downstream of the project site. Thus, the project would not impede or redirect flood flows.
- j. The project would not expose people or structures to any loss because of flooding.
- k. The project would not create problems from inundation due to seiche, tsunami, or mudflows.

Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The project area lies within Plumas County. The project is near a popular recreational area, but will not affect any of the recreational facilities or access to those facilities.

Standards

Impacts to land use and planning would be considered significant if they conflicted with designations for Plumas County land use goals and policies.

Environmental Consequences

The project would not result in zoning changes and does not conflict with adopted local or regional plans. The zoning designation for the project area is Lake Zone. Permitted uses within the Lake Zone include water impoundment. Construction and installation of the containment system is a permitted use because it is a necessary part of the outlet structure for the Dam. According to the Plumas County General Plan, the land use

designation for the area surrounding the outlet is Rural Residence. The project will occur on the 15 acre parcel owned by DWR. Permitted work to an existing structure on DWR land will not conflict with the land use designation. Therefore, no significant direct, indirect, or cumulative negative impacts to land use planning are associated with the project. All construction at the outlet will occur in the existing channel or on existing graded soil adjacent to the outlet building.

Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

There are currently no mineral extraction activities in or near the project site.

Standards

Impacts to mineral resources could be considered significant if they were to result in a substantial loss of availability a known mineral resource or a locally important mineral resource recovery site.

Environmental Consequences

There are no significant direct, indirect, or cumulative negative impacts to mineral resources associated with the project. No minerals will be removed during the course of the construction or implementation of the project.

Noise

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The project is in a predominantly rural area with generally lower noise levels than in urban areas. The ambient noise environment over Lake Davis can be characterized as quiet and largely unaffected by human-made sources of noise. The noise in the Lake Davis area is generated by automobile traffic on Lake Davis Road, Grizzly Road, and boating activities.

Standards

Noise impacts could be considered significant if sensitive noise receptors such as residential units, hotels, schools, and churches were located near the project site.

Environmental Consequences

Construction equipment and activities will cause a temporary noise level increase at the project site during the construction window. The outlet is in a canyon which should dampen noise to less than significant levels. Because construction will not take place after dark, impacts to wildlife near the project site will be minimized. The nearest property is around ¼ of a mile from the project site and should not be affected by noise created from construction. Noise created by construction activities will be less than significant and temporary. The strainers will run 24 hours a day, year round, except during emergency shut off. The operation of the strainers should not create a noise issue since they do not have motors. There will be daily trips to the strainers for routine maintenance and cleaning. Any noise created by this activity will be minimal.

Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The City of Portola, population around 2,250, is approximately six miles from the construction area. There are housing developments closer to the construction zone; however, there are no homes within about a ¼ mile of the construction zone.

Standards

Impacts to housing would be considered significant if they conflicted with Plumas County housing goals and policies.

Environmental Consequences

This project would not entail a significant change in population, employment, or housing. At any one time during the construction phase, no more than ten employees will be on site. There would be no need for additional employees after the project is complete. The project would not induce substantial growth or displace area residents. The project is in a rural area and the project would not cause nor exacerbate a housing shortage. There are no significant direct, indirect, or cumulative negative impacts to housing associated with the project.

Public Services

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Fire: Will the project require additional staff or equipment to maintain an acceptable level of service (i.e., response time, equipment capacity)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Police: Will the project require additional staff or equipment to maintain acceptable service ratios, response times or other performance objectives?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Schools: Will the project increase the population of school-age children in a K-12 school district that is or will be operating without adequate staff, equipment, or facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

Fire protection in the area of the project at the outlet of Lake Davis and on top of Grizzly Valley Dam is provided by Eastern Plumas Rural Fire Protection District. The majority of the project footprint is composed of rocks and soil lacking in vegetation (Photos 1 and 2). The hillside adjacent to the outlet contains vegetation that could be prone to fire, especially during the summer months, but no construction will occur in these areas.

Standards

Impacts to public services would be considered significant if they conflicted with the General Plan for the Portola or with Plumas County public services goals and policies.

Environmental Consequences

The project would not cause development in the area and should not cause population growth. The project would not affect the service ratios, response times, or other

performance objectives of local law enforcement or local fire protection agencies. The project would not change the risk for wildland fires. Schools would not be impacted because population would not be affected. There are no significant direct, indirect, or cumulative negative impacts to public services associated with the project.

Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The Lake Davis Area offers a wide variety of recreational activities including: camping, picnicking, fishing, hunting, boating, mountain biking, swimming, and wildlife viewing. During the winter, ice fishing, snowmobiling, and cross-country skiing are popular activities. Additionally, Walton's Grizzly Lodge is a children's summer camp that is located off of Big Grizzly Creek downstream of the outlet from Lake Davis.

Standards

The project would have a significant negative impact on recreation if it were to increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Environmental Consequences

The project would not have a significant negative impact on recreation. Some of the construction activities may affect the available parking at the parking lot on top of Grizzly Valley Dam. The presence of workers personal vehicles, and contractor vehicles should not have any adverse impact on recreational facilities. The parking lot is anticipated to have adequate space available for visitors and no expansion will be necessary.

Containment of northern pike will protect existing fish populations in Big Grizzly Creek downstream of the Lake. The trout fishery downstream of Lake Davis will not be affected by the presence of the strainers. Currently, there is no recruitment of trout in Big Grizzly Creek from Lake Davis. Construction related flow reductions may adversely affect fisheries downstream from the project. Monitoring of similar flow reduction over a four-day period during October 2004 indicated that measurable groundwater and other seepage emerges immediately below Grizzly Valley Dam and appears sufficient to maintain continuity of stream flow throughout Big Grizzly Creek downstream of the Dam (DWR 2006). The flow bypass line will allow for normal minimal releases to occur during most construction activities, with the exception of the bar rack and bypass line installations. During the installation of the bar racks and bypass line, flow in Big Grizzly Creek will be augmented by using a screened portable pump to draw water from Lake Davis. This will provide around 0.5 cfs to the creek and should further minimize already less than significant impacts. A hillside spring emerges from the meadow complex located about 150 yards downstream from the dam outlet structure and provides surface water flow to the stream channel, allowing the downstream fishery to survive short-term flow reductions.

Walton's Grizzly Lodge maintains a lake on its property that is used for recreational activities during the summer. The lake requires a flow of 4-5 cfs in order to maintain a level necessary for recreational activities. During flow shut off periods, the flow augmentation line and the additional spring water located downstream will provide water to Big Grizzly Creek that can be used for the pond. In addition, DWR will notify Walton's Grizzly Lodge one week prior to any flow shut off periods. Other than during the installation of the bar racks and the flow bypass line, flow shut off periods will occur after August 26, 2006. August 26, 2006 is the date that the summer season ends at Walton's Grizzly Lodge Summer Camp. The 0.5 cfs flow augmentation, keeping most shut of periods after August 26, and providing one week notification to downstream diverters will further minimize already less than significant impacts.

No applicable permits and regulations pertaining to recreation would be required for the project. No significant direct, indirect, or cumulative negative impacts to recreation are associated with implementation of the project.

During the period of construction, the construction will interfere with anglers accessing pools downstream of the dam. But this will last only for four months and will not occur on Sundays. The impact will be less than significant.

Traffic and Transportation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

The project site is located adjacent to Lake Davis Road, which is maintained by Plumas County Department of Public Works. The most recent traffic counts for Lake Davis Road occurred in May 2003. The access road to the outlet will receive an increase in traffic during construction and operation of the new facilities. During the construction period, Plumas County will be doing some maintenance on guardrails in the vicinity of our project. DWR will coordinate all construction activities with Plumas County to eliminate conflicts.

Standards

In the vicinity of the project site, vehicles in excess of 14,000 pounds are prohibited on Lake Davis Road up to Forest Service Road 24N10 (approximately 1 mile west of Grizzly Valley Dam, Figure 1). This provision does not apply to the use of commercial vehicles in transporting items to or from locations inaccessible to State Highway 70 except by way of Lake Davis Road. Lake Davis Road is a rural road that is not accustomed to busy traffic and continuous truck traffic. Grizzly Road has a golf cart road crossing over it approximately 2-3 miles north of State Highway 70. The maximum vertical clearance of the golf cart crossing is 16 ft, with a 14 ft legal height. Grizzly Road is designated as an alternate route for commercial traffic in excess of 14,000 pounds.

Table 3. Daily traffic counts taken by Plumas County Department of Public Works during May 2003.

Location	Date	Vehicle Count
Lake Davis Road (north, south)	05/20/2003	146
Lake Davis Road (west, east)	05/20/2003	154
Lake Davis Road (north, south)	05/21/2003	289
Lake Davis Road (west, east)	05/21/2003	269
Lake Davis Road (north, south)	05/22/2003	315
Lake Davis Road (west, east)	05/22/2003	313
Lake Davis Road (north, south)	05/23/2003	477
Lake Davis Road (west, east)	05/23/2003	474
Lake Davis Road (north, south)	05/24/2003	643
Lake Davis Road (west, east)	05/24/2003	772
Lake Davis Road (north, south)	05/25/2003	653
Lake Davis Road (west, east)	05/25/2003	751
Lake Davis Road (north, south)	05/26/2003	610
Lake Davis Road (west, east)	05/26/2003	582
Lake Davis Road (north, south)	05/27/2003	136
Lake Davis Road (west, east)	05/27/2003	151

Environmental Consequences

Vehicles are exempt from the 14,000 pound weight restriction if they service utilities or provide emergency fire or police protection. There will be trucks during the construction phase that will exceed 14,000 pounds. These trucks will enter the project site by Grizzly Road instead of Lake Davis Road. Any portion of Lake Davis Road that is used by loads over 14,000 pounds will be east of Forest Service Road 24N10. All construction vehicles will be less than 14 ft high, so the 14 ft height limit for the golf cart road crossing will not be a problem.

Project construction would result in a temporary increase in truck traffic, primarily along Lake Davis Road. Truck traffic through Portola and on Lake Davis Road has the potential to cause impacts to traffic along the route to and from Lake Davis. Trucks turning in and out of the project site could also cause traffic hazards. We estimate five

truck trips to the project area each work day, for a total of 500 trips during the entire construction period (July – mid November). Based on the daily traffic counts from Lake Davis Road, an additional five trips per day will not have a significant impact on traffic in the area.

The contractors will implement traffic safety measures required by DWR. This will include all appropriate road warning signs. It is anticipated that construction traffic will not cause any significant impacts to the traffic safety of the area.

Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
g) Comply with federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Affected Environment

Modifications for the outlet structure at Lake Davis will not affect normal operation of the reservoir. Two water rights holders draw water directly from Big Grizzly Creek, downstream of Lake Davis. During construction, the outflow into Big Grizzly Creek will be to shut off periodically (no more than six times). Each of these events will last a maximum of four days and will not affect normal operations at Lake Davis.

Standards

Impacts to utilities and service systems would be considered significant if they conflicted with the General Plan for Portola or with Plumas County goals and policies.

Environmental Consequences

The project will not have significant adverse impacts to wastewater treatment, or solid waste treatment. No significant direct, indirect, or cumulative negative impacts to utilities or service systems are associated with this project. The project does not involve any uses that will discharge any wastewater to sanitary sewer or on-site wastewater systems (septic). The project does not include new or expanded water or wastewater treatment facilities. In addition, the project does not require the construction or expansion of water or wastewater treatment facilities. The project does not include new or expanded storm water drainage facilities. The project does not involve or require water services from a water district. The project proposes to change the outlet structure and will not rely on water service for any purpose. After the construction period is over, outflow release will occur according to DWR's water rights permits (15254, 15255) and the associated Grizzly Valley Dam Operations Agreement of March 31, 1994. Federal, State, or local solid waste statutes or regulations are not applicable to this project.

During the flow cessation periods, flows for downstream diverters, including Grizzly Ice Pond, will be reduced. DWR will notify downstream diverters at least one week prior to all shut off periods. The release of the 0.5 cfs flow augmentation and the spring water located downstream of the project footprint, will provide water to Big Grizzly Creek during the flow cessation periods and should further minimize impacts to already less than significant levels. Releases will resume as quickly as possible. We will coordinate with the Grizzly Creek Dam operator to release adequate flow downstream for water diverters, to avoid impacts to downstream water diverters, and we will minimize impacts to Grizzly Ice Pond to levels that are less than significant.

A small amount of waste will be generated when fish are entrained in the strainers. The volume is expected to be small enough that impact to the Intermountain Disposal Company's disposal facilities in Lockwood, Nevada will be negligible.

Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

The project will not have a significant impact to Lake Davis or Big Grizzly Creek. During construction, the outflow from Lake Davis into Big Grizzly Creek may be shut off up to six times. Each shut off period will last a maximum of four days. Shut off periods will never occur adjacent to one another. However, the construction of the flow bypass line should necessitate only two shut off periods (bar rack and bypass line installations). The bypass line will release at least 10 cfs (normal minimum flows) downstream of the Cipolletti weir. Natural runoff keeps the stream flowing 150 yards downstream of the Dam (DWR 2006). To further minimize already less than significant impacts, DWR will augment flow in Big Grizzly Creek with about 0.5 cfs of Lake Davis water by using a screened portable pump. In addition, DWR will notify downstream diverters at least one week in advance of any flow shut off periods. We will coordinate with Grizzly Creek Dam operator to release adequate flow downstream for water diverters, to avoid impacts to downstream water diverters, and we will minimize impacts

to Grizzly Ice Pond to levels that are less than significant. Releases from Lake Davis will resume as quickly as possible.

To avoid fisheries mortality in the 150 yard stretch downstream of the Grizzly Valley Dam, fish will be removed via electrofishing and placed in Lake Davis or further downstream in Big Grizzly Creek (to be consistent with DFG's Streambed Alteration Agreement) before each construction related flow reduction. To further minimize less than significant impacts to fisheries resources, flow in Big Grizzly Creek will be augmented by using a screened portable pump to draw water from Lake Davis. This will provide around 0.5 cfs during periods when the flow will be shut off. In addition, the releases from the bypass line will maintain instream flows downstream of the Cipolletti weir during the rest of the construction period.

To further minimize less than significant recreation impacts to Walton's Grizzly Lodge Summer Camp activities during flow shut off periods, DWR will install a flow augmentation line to add about 0.5 cfs to Big Grizzly Creek, and will as much as possible conduct construction activities that may require flow to be shut off after the close of the summer season on August 26, 2006.

The project will permanently dry Big Grizzly Creek from the dam downstream to Cipolletti Weir (55ft.). The loss of this portion of the creek will have a less than significant impact on the fish and wildlife of the area and on the drainage pattern.

A small amount of emergent wetland vegetation (mainly sedges) and a small Ponderosa pine (< 4 in. dbh) will be removed during construction. The Ponderosa pine will be replaced after project completion. Although no riparian vegetation will be removed by the project, DWR will plant willow cuttings downstream of the Cipolletti weir to the pedestrian bridge.

V. Determination

On the basis of the Initial Study, I find that the project, as mitigated by the measures discussed within this document and adopted by the Department of Water Resources, will not have a significant effect on the environment. A Mitigated Negative Declaration will be submitted.



Mark Cowin, Chief
Division of Planning and Local Assistance

VI. Agencies Consulted

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
CA Department of Fish and Game
CA Air Resources Board
Central Valley Regional Water Quality Control Board
Plumas County

VII. References

Department of Water Resources, January 18th 2006. Memorandum Report from Barbara McDonnall to Pete Scheele. 2006.

Plumas County General Plan, Second Edition,
http://www.countyofplumas.com/building_planning/general_plan.htm

Rischbieter, Douglas B. C. 2000. Structures to Prevent the Spread of Nuisance Fish from Lake Davis, California. North American Journal of Fisheries Management 20:784-790.

Rischbieter, Douglas B. C. 2006. Personal communication via e-mail.

VIII. Responsible Personnel

The mitigated Negative Declaration and Initial Study were prepared for:

Richard Sanchez, Principal Engineer
The Department of Water Resources
Division of Operations and Maintenance
1416 Ninth Street
Sacramento, CA 95814

by

The Department of Water Resources
Division of Planning and Local Assistance

Authors:

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Gordon Enas, Senior Engineer
Mike Hendrick, Environmental Scientist
Gail Kuenster, Senior Environmental Scientist
Janis Offermann, Senior Environmental Planner
David Panec, Senior Engineer
Leslie Pierce, Senior Environmental Scientist
Douglas Rischbieter, Staff Environmental Scientist

Contact person and phone number for Initial Study and Mitigated Negative Declaration:
Leslie Pierce, Senior Environmental Scientist, (916) 651-9630

STATE OF CALIFORNIA THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENVIRONMENTAL SERVICES
ENVIRONMENTAL COMPLIANCE AND EVALUATION BRANCH
1725 23RD STREET, SUITE 220
SACRAMENTO, CA 95816

ARNOLD SCHWARZENEGGER, Governor

February 21, 2006

Dr. Antoinette Martinez, Coordinator
Northeast Information Center
California State University, Chico
Building 25, Suite 201
Chico, CA 95929-0377

Attention: Ms. Amy Huberland
Assistant Coordinator

Dear Dr. Martinez:

The California Department of Water Resources (DWR) is proposing to construct a fish containment structure at Lake Davis in Plumas County, California. The purpose of the structure is to prevent the movement of northern pike, an invasive species, down Grizzly Creek and into the Feather River and, ultimately, the Sacramento River systems. The project area is depicted in Sections 1 and 2, Township 23 North, Range 13 East on the Crocker Mountain 7.5' USGS topographic quadrangle (see attached map).

Please conduct an **expedited** search of your records and inform us of any known cultural resources or surveys performed within a ½ -mile radius of the project location, as delineated on the attached map. Please also supply copies of all site records for resources within the project area. Your results can be sent to me at the address shown above. I can be contacted at (916) 445-6478 or at janiso@water.ca.gov if you have any questions regarding this request. This record search is authorized under Standard Agreement #4600003349 between DWR and California State University, Chico Research Foundation. It is understood that the rapid response rate will be charged for this service.

Thank you for giving this matter your prompt attention.

Sincerely,

Original signed by

Janis Offermann
Senior Environmental Planner

Attachment

STATE OF CALIFORNIA THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENVIRONMENTAL SERVICES
ENVIRONMENTAL COMPLIANCE AND EVALUATION BRANCH
1725 23RD STREET, SUITE 220
SACRAMENTO, CA 95816

ARNOLD SCHWARZENEGGER, Governor

February 21, 2006

Ms. Debbie Pilas-Treadway
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Dear Ms. Pilas-Treadway:

The California Department of Water Resources (DWR) is proposing to construct a fish containment structure at Lake Davis in Plumas County, California. The purpose of the structure is to prevent the movement of northern pike, an invasive species, down Grizzly Creek and into the Feather River and, ultimately, the Sacramento River systems. The project area is depicted in Sections 1 and 2, Township 23 North, Range 13 East on the Crocker Mountain 7.5' USGS topographic quadrangle (see attached map).

Please notify me if any sacred lands are recorded within or in close proximity to the depicted project area. Early identification of sacred properties will ensure their consideration during the project planning phase. Please also provide an updated list of Native American contacts for the area. Your response may be sent to me at the address provided above, or you may fax the information to (916) 445-6507. I can be contacted at (916) 445-6478 or at janiso@water.ca.gov if you have any questions regarding this request. If we do not receive a response to this inquiry within 30 days, it will be assumed that you are not aware of any sacred lands within the project area.

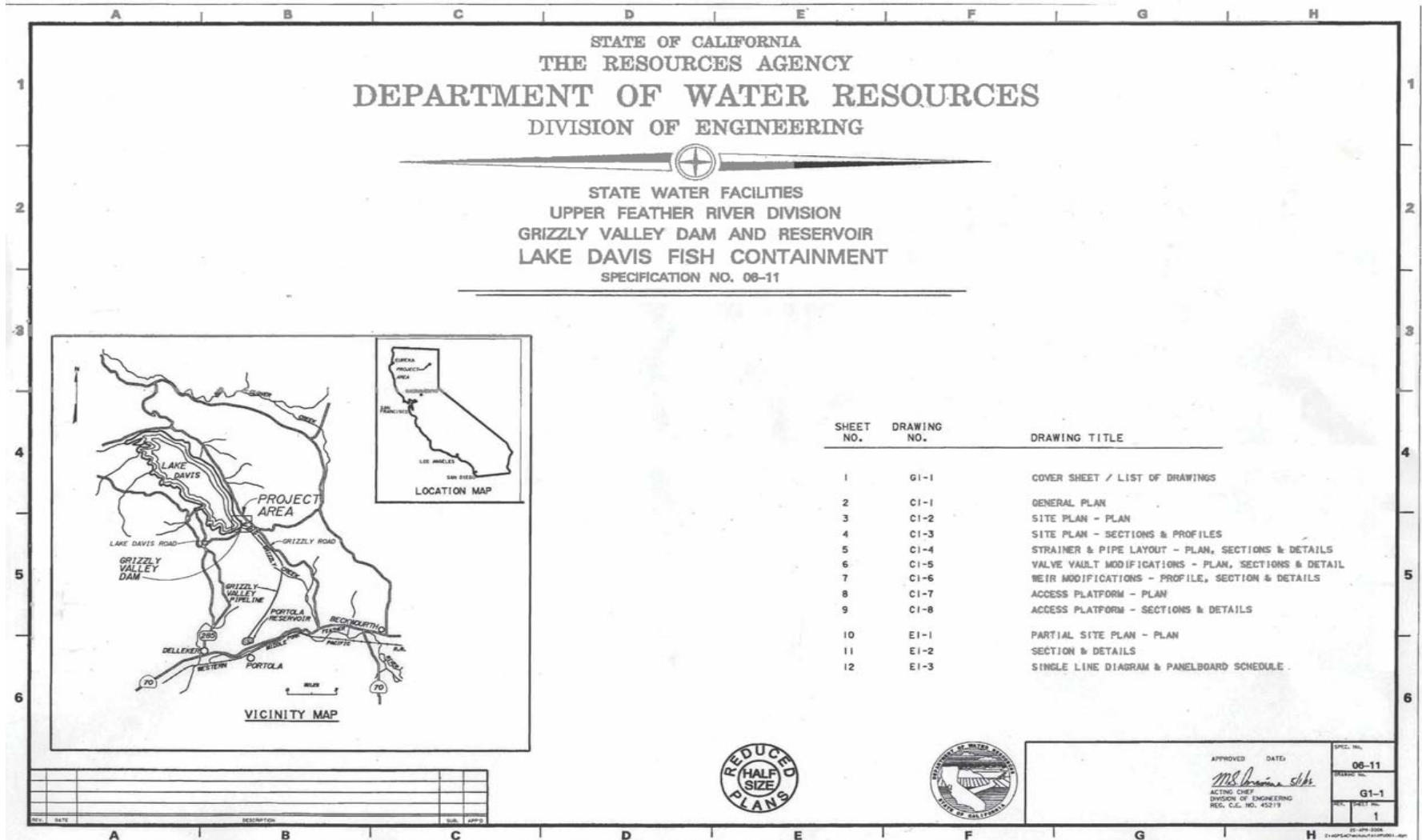
Thank you for giving this matter your prompt attention.

Sincerely,

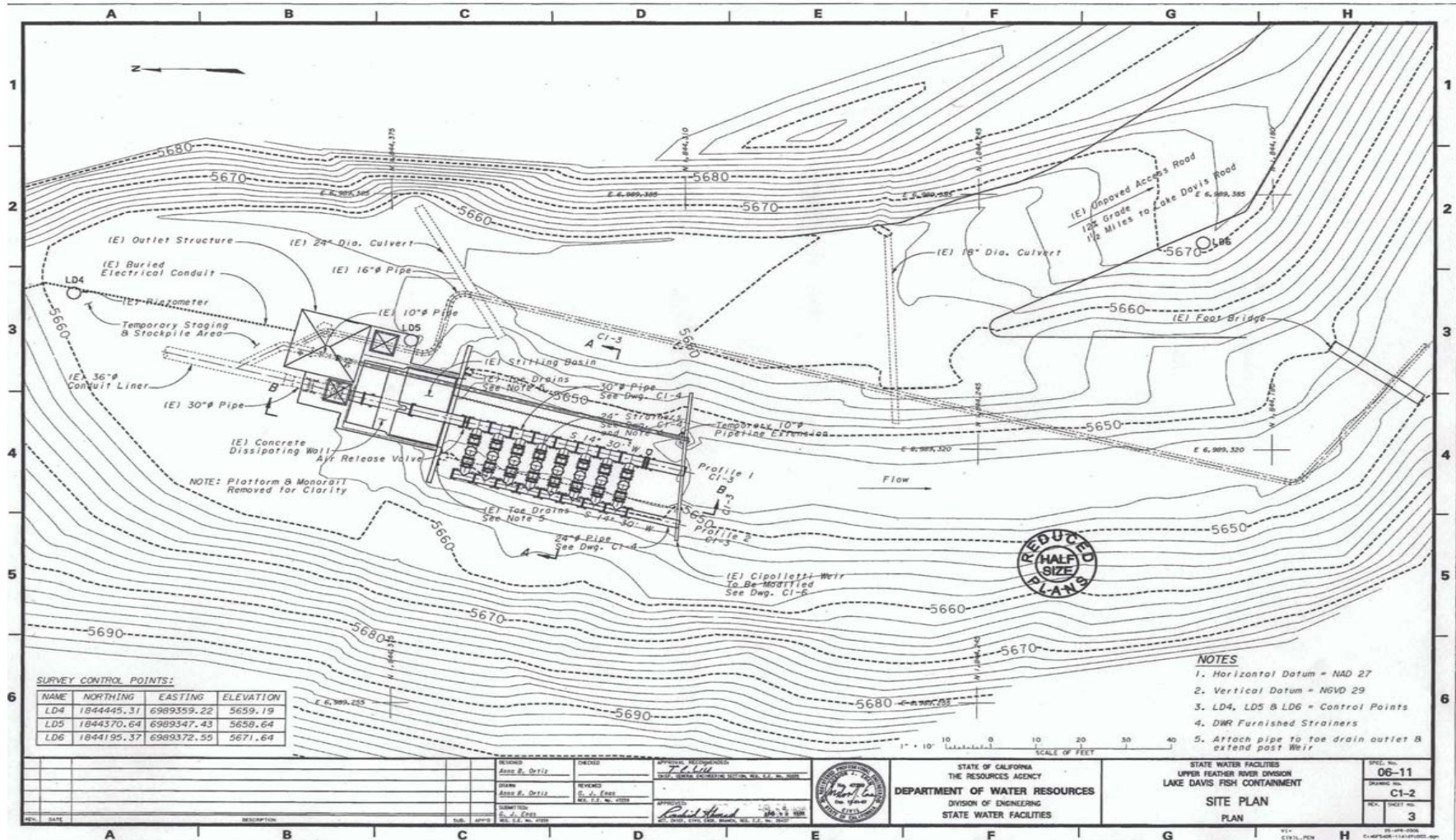
Original signed by

Janis Offermann
Senior Environmental Planner

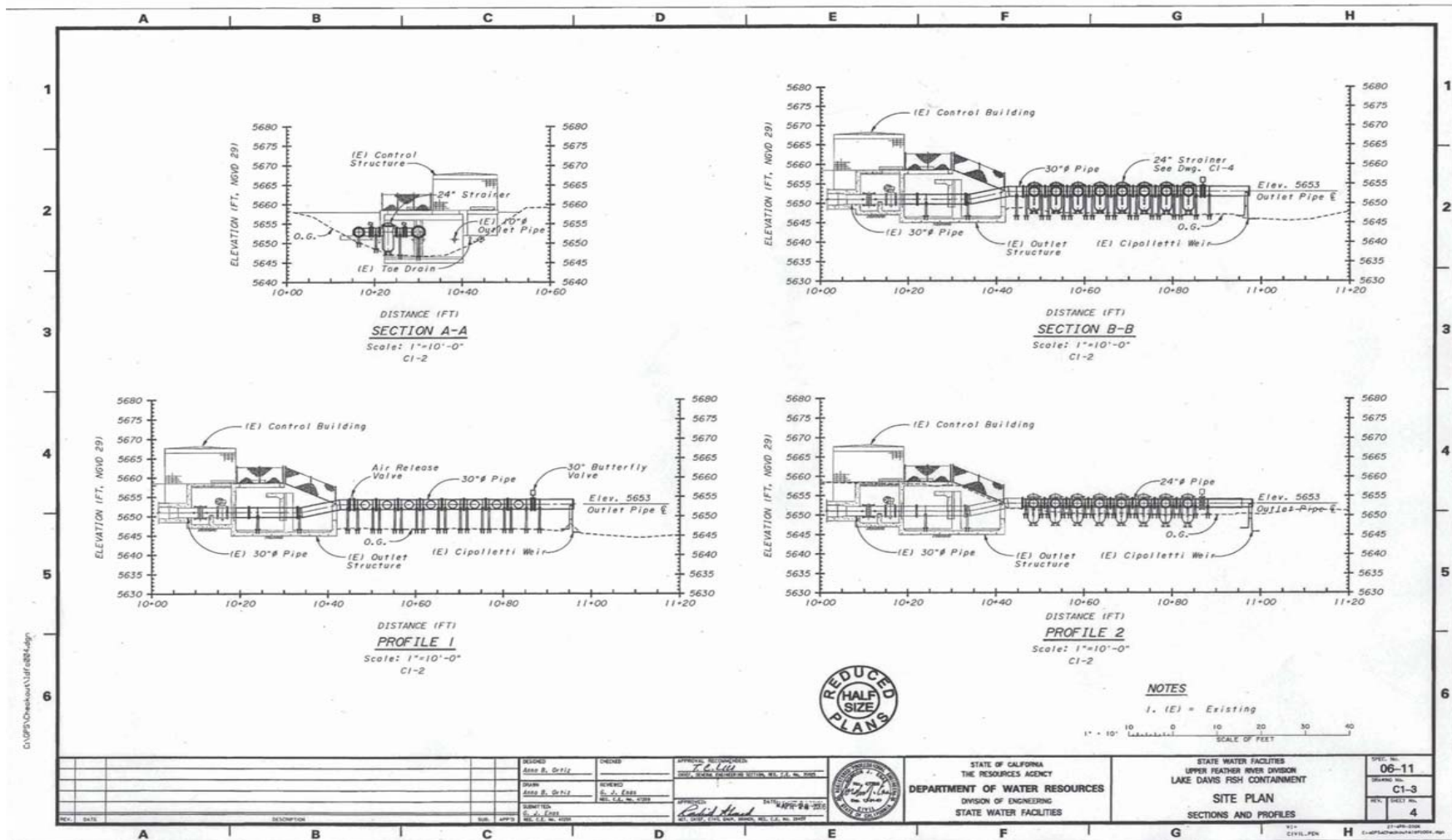
Drawing 1. Project Area Overview



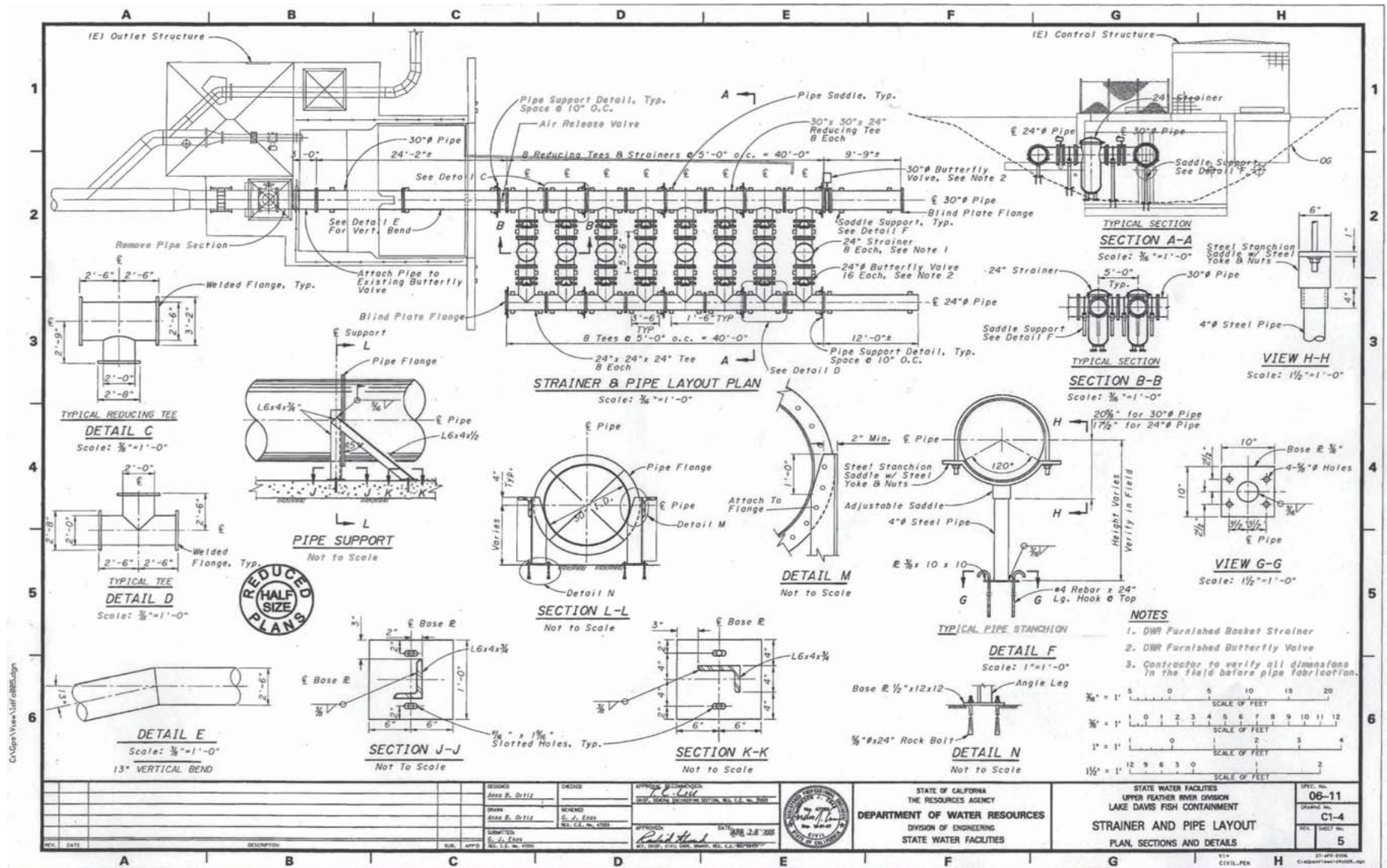
Drawing 2. Project Plan Overhead View



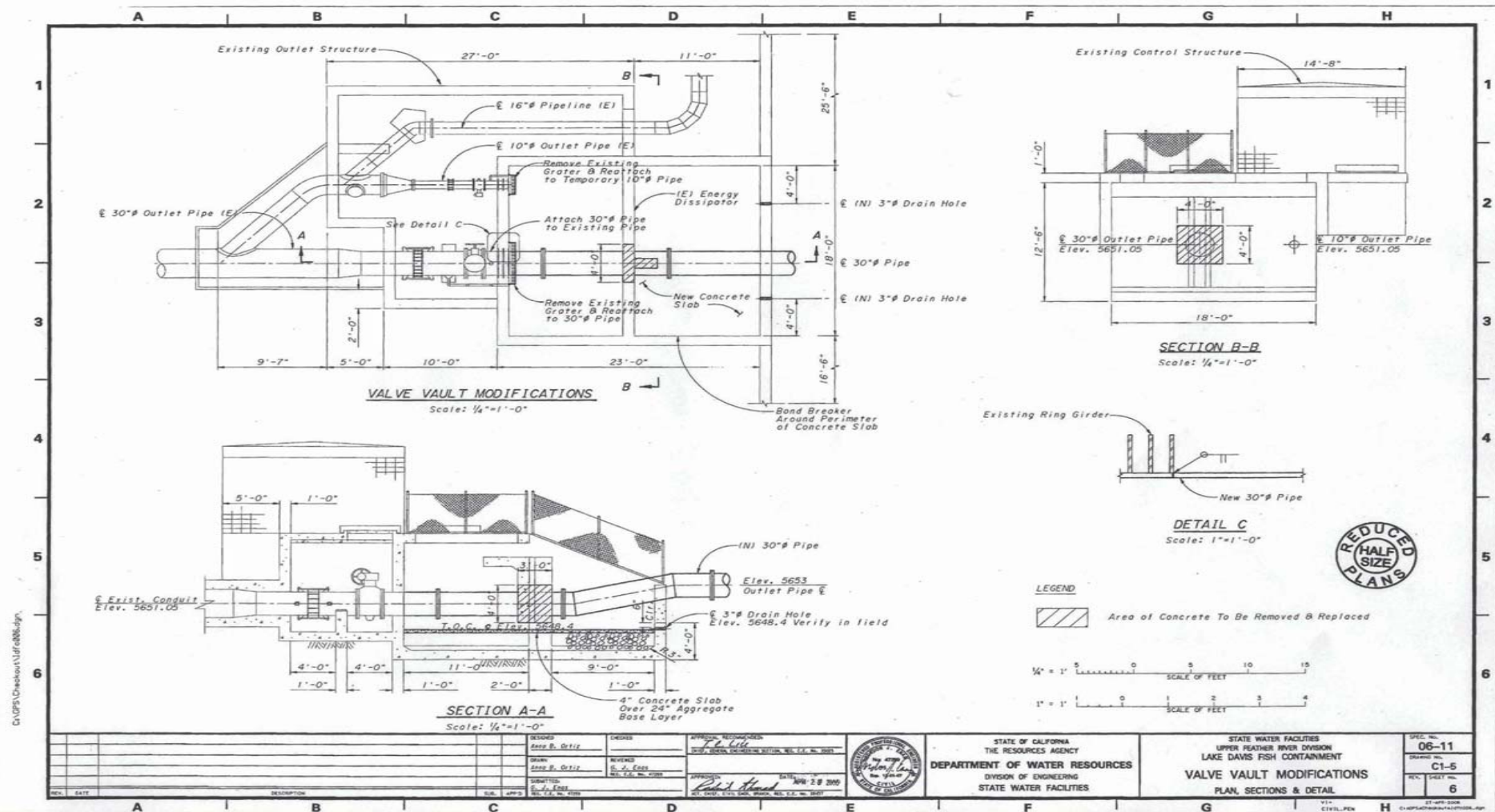
Drawing 3. Project Plan Profile View



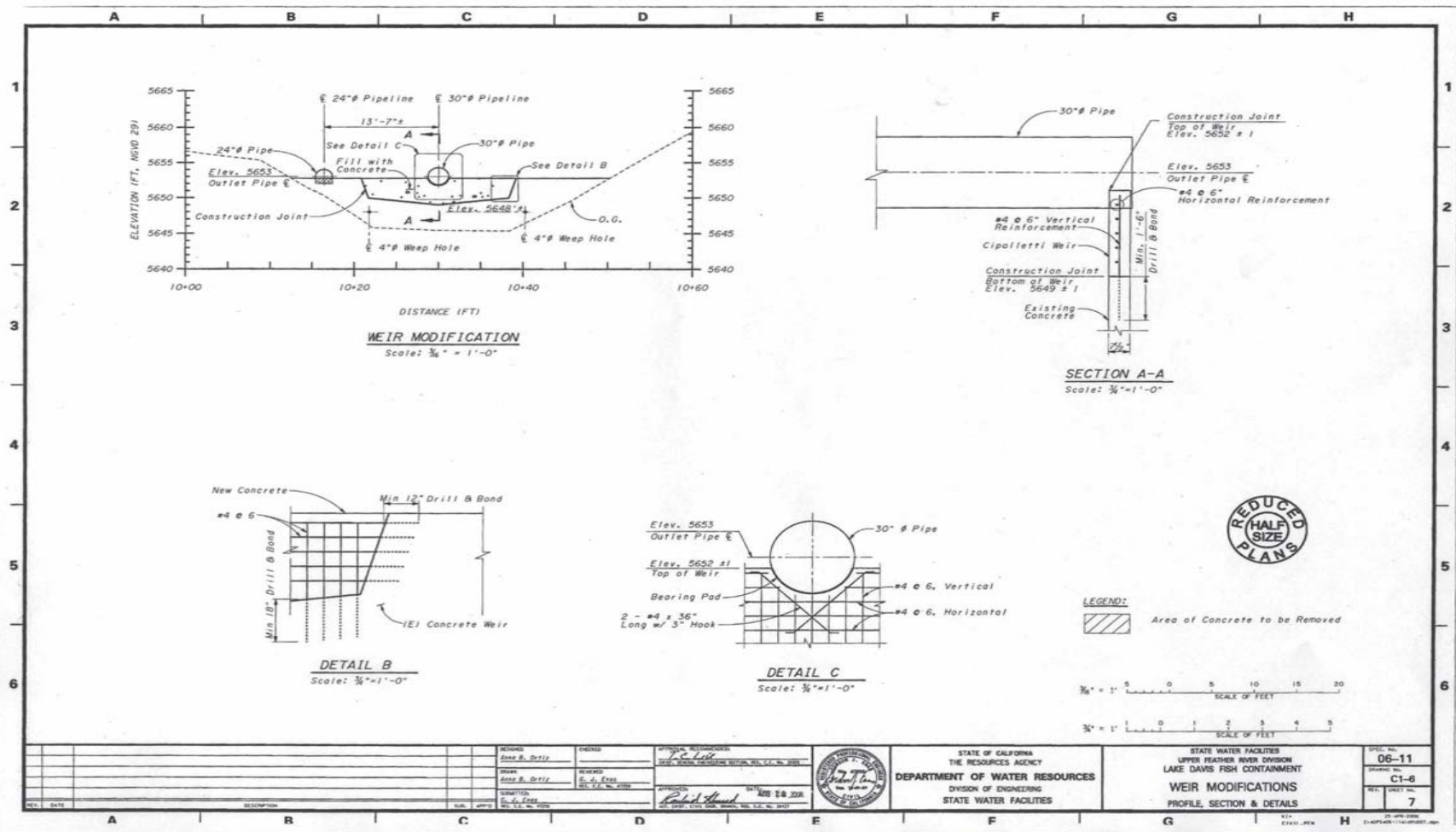
Drawing 4. Piping and Strainer Layout



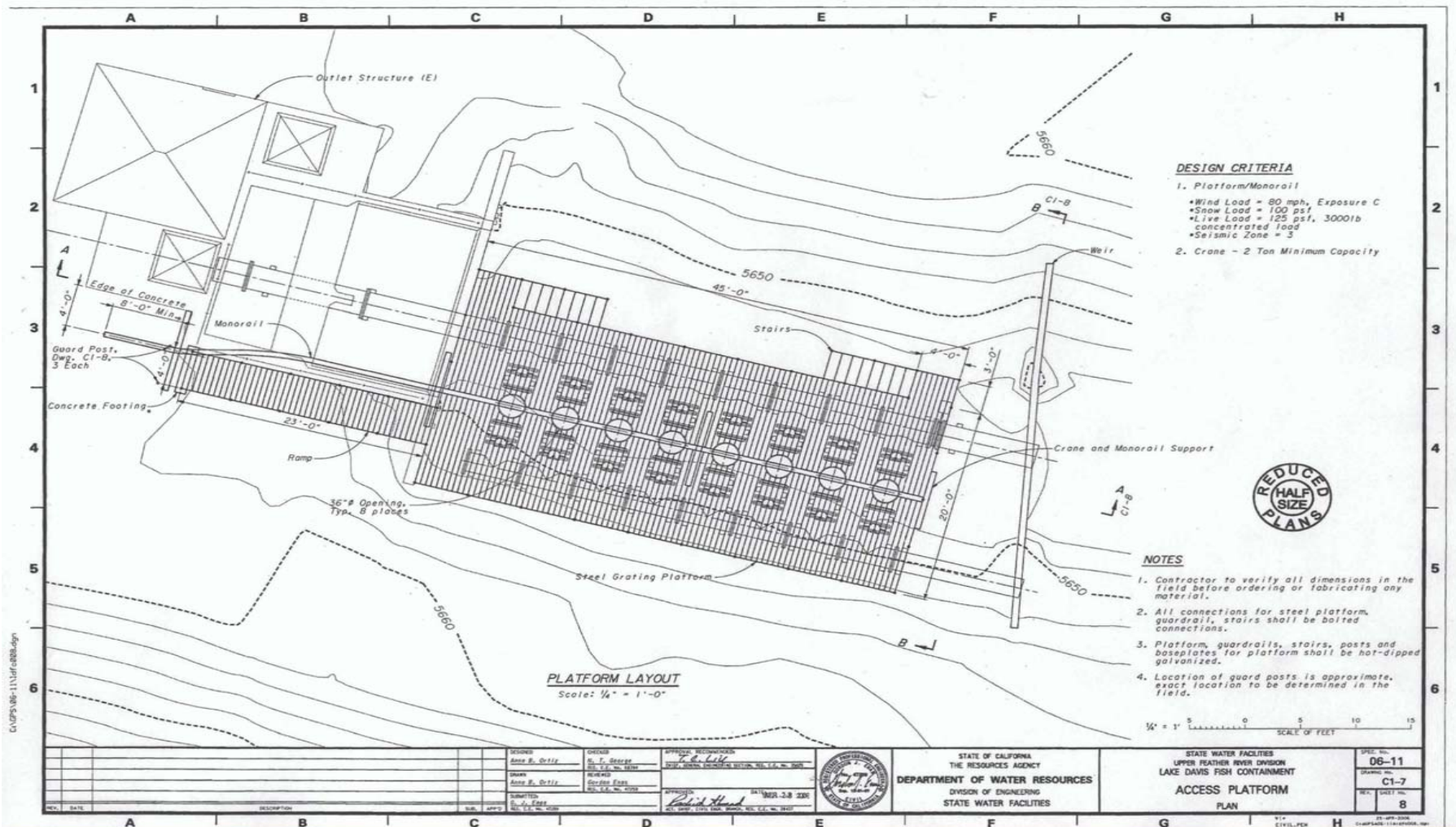
Drawing 5. Valve Vault Modifications



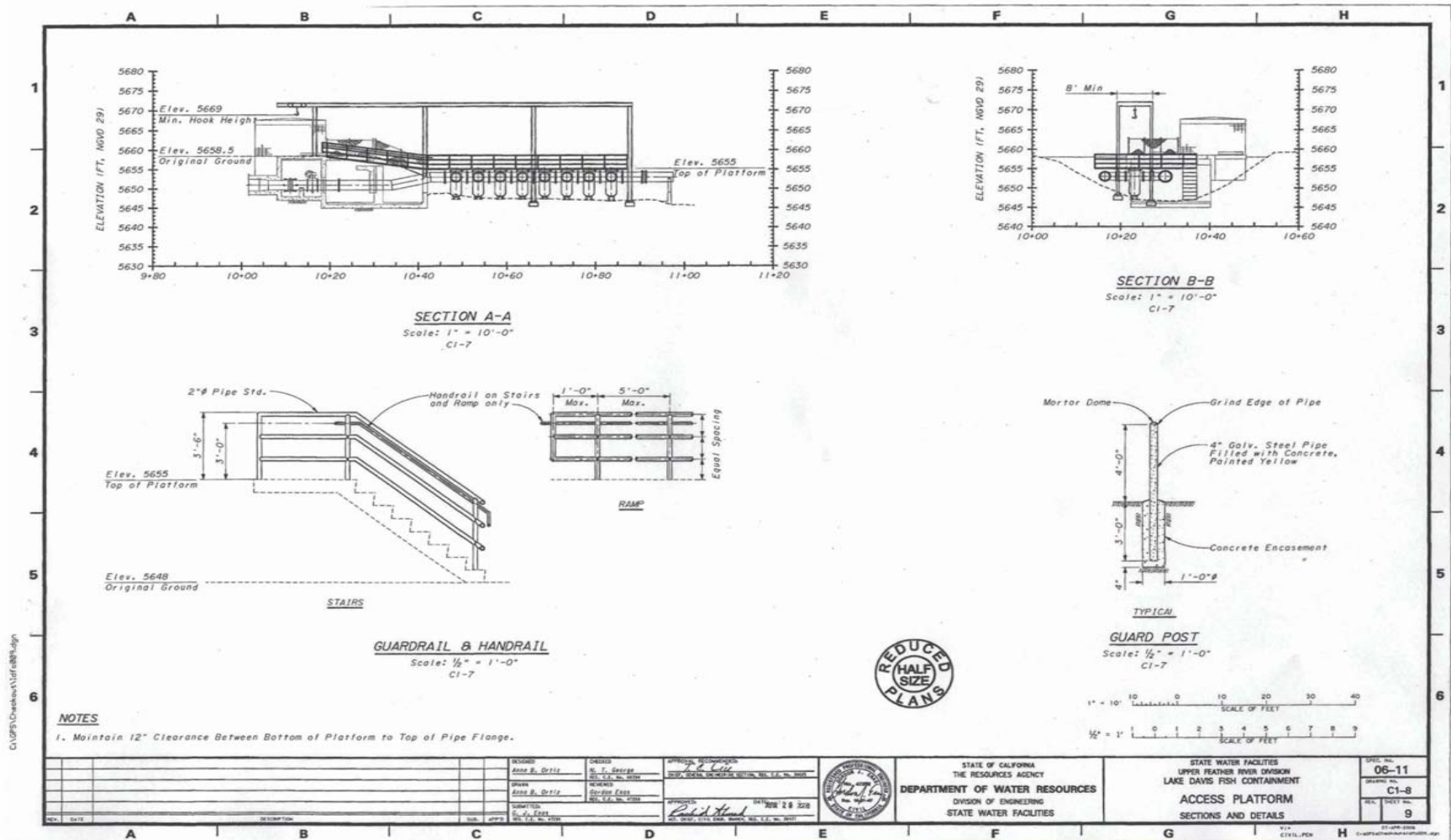
Drawing 6. Cipolletti Weir Modifications



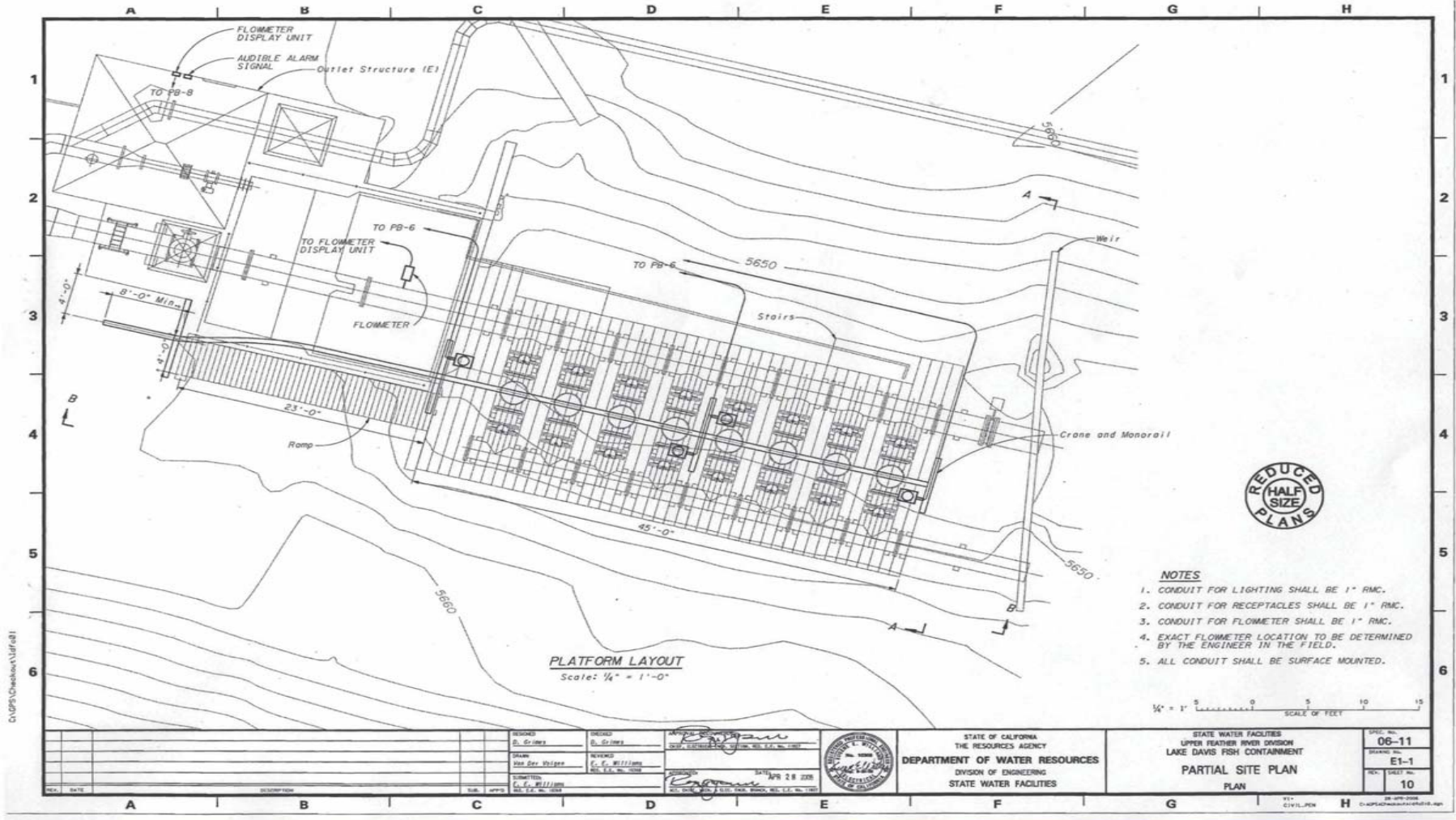
Drawing 7. Platform Layout



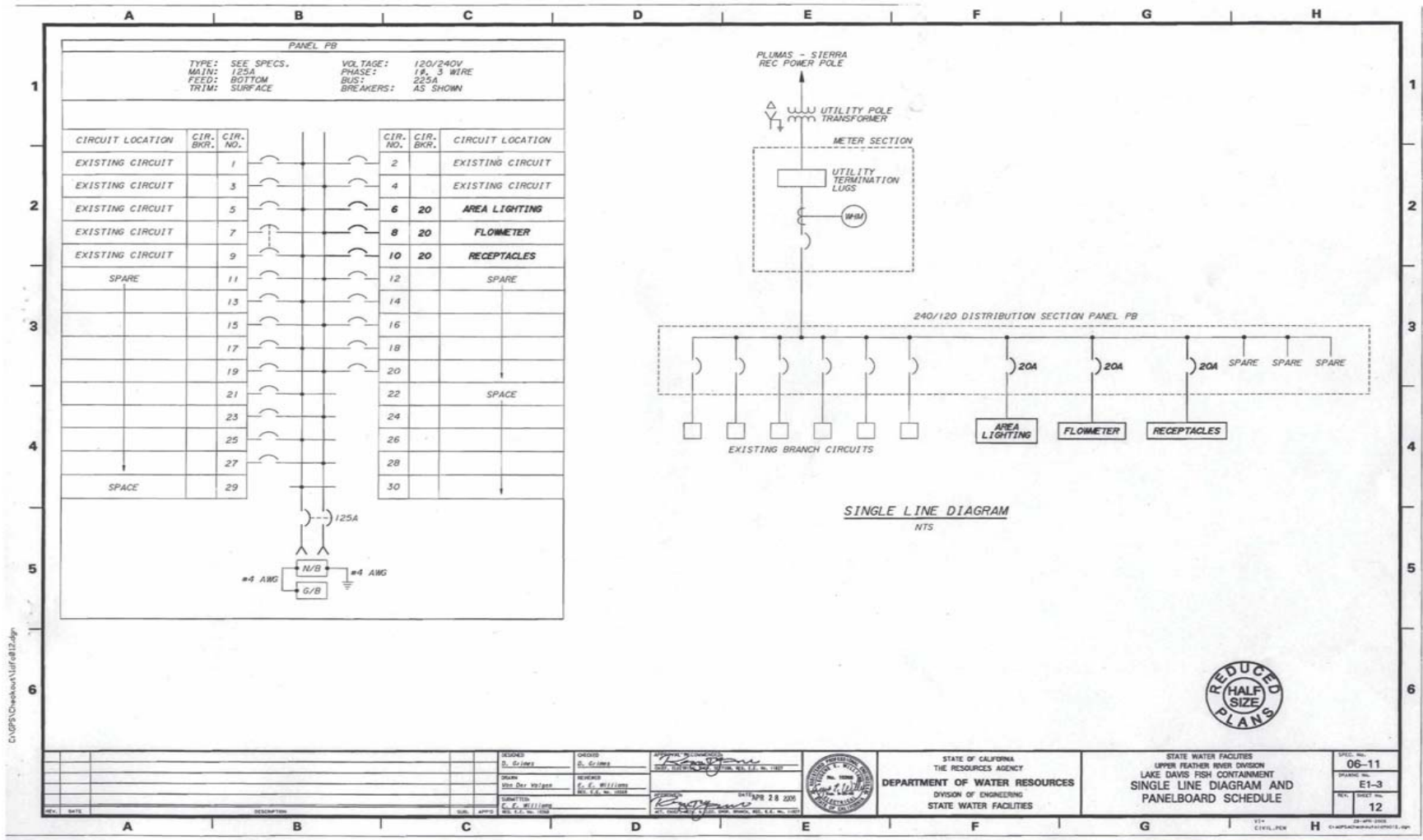
Drawing 8. Guardrail and Handrail Layout



Drawing 9. Platform with Lighting



Drawing 10. Lighting and Circuit Plan



Drawing 11. Outdoor Lighting Diagram

